

# Schedule



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## 3 Convenient Campuses

### Oregon City

19600 Molalla Ave.  
Oregon City, OR 97045

### Wilsonville

29353 SW Town Center Loop E.  
Wilsonville, OR 97070

### Harmony

7738 SE Harmony Road  
Milwaukie, OR 97222

## Non-Discrimination

*Clackamas Community College does not discriminate on the basis of race, color, religion, gender, sexual orientation, marital status, age, national origin/ancestry, disability, family relationship or any other protected status in accordance with applicable law. The college's commitment to nondiscrimination applies to curriculum activity and all aspects of operation of the college.*

# IMPORTANT DATES TO REMEMBER



CLASS START/END DATES + FINANCIAL DEADLINES *	SPRING TERM 2026	SUMMER TERM 2026	FALL TERM 2026
<b>Financial aid:</b> All required CCC financial aid documentation due to ensure funding for term	Jan. 5	March 30	June 22
<b>Registration begins</b>	Feb. 23	May 11	May 18
<b>Classes begin</b>	March 30	June 22	Sept. 28
Last day to add classes without instructor consent	Instructor consent required once course begins		
Last day to drop a class with a refund (see p. 5 for more info)	April 12	July 5	Oct. 11
Last day to drop classes and receive a "W" automatically	May 22	August 14	Nov. 20
Last day to submit petition for graduation	May 8	July 31	Nov. 6
Last day to change grading option	June 5	August 28	Dec. 4
Account balance due: \$100 non-payment fee applied if not paid	May 8	July 31	Nov. 6
<b>Final week</b>	June 8-13	see course syllabus	Dec. 7-11
<b>Last day of term</b>	June 13	Sept. 5	Dec. 12
Commencement: GED & Adult High School Diploma / College Certificate and Degree	Friday evening, June 12, 2026		

\* Deadlines are the end of the business day unless otherwise noted. All calendar dates are subject to change without prior notice.

## HOLIDAYS AND CAMPUS CLOSURES

<b>SPRING TERM: May 25</b> Memorial Day
<b>SUMMER TERM: June 19</b> Juneteenth, <b>July 2</b> Independence Day
<b>FALL TERM: Sept. 7</b> Labor Day, <b>Nov. 11</b> Veterans Day

## FINAL EXAM SCHEDULE

**Refer to your class syllabus or check with your instructor for the final week schedule. The final week schedule will be posted in your myClackamas account as soon as it is available.**



# CLACKAMAS IN YOUR COMMUNITY

*Credit and non-credit courses offered at Clackamas Community College sites near you Spring 2026*

## Harmony Community Campus

*Complete course information available in **Credit Course Listings**. Indicated with: **HAR***

### Biology

BI-112	GENERAL BIOLOGY FOR HEALTH SCIENCES	4 CREDITS
BI-112L	GENERAL BIOLOGY FOR HEALTH SCIENCES LAB	0 CREDIT
BI-120	INTRODUCTION TO HUMAN ANATOMY AND PHYSIOLOGY	4 CREDITS
BI-120L	INTRODUCTION TO HUMAN ANATOMY AND PHYSIOLOGY LAB	0 CREDIT
BI-233	HUMAN ANATOMY & PHYSIOLOGY III	4 CREDITS
BI-233L	HUMAN ANATOMY & PHYSIOLOGY III LAB	0 CREDIT

### Chemistry

CH-112	CHEMISTRY FOR HEALTH SCIENCES	4 CREDITS
CH-112L	CHEMISTRY FOR HEALTH SCIENCES LAB	0 CREDIT

### College and Career Guidance

HD-202ES	TRANSICIONES DE VIDA	3 CREDITS
HD-208ES	PLANIFICACIÓN DE CARRERA Y VIDA	3 CREDITS

### Communication Studies

COMM-111Z	PUBLIC SPEAKING	4 CREDITS
COMM-218Z	INTERPERSONAL COMMUNICATION	4 CREDITS

### Criminal Justice

CJA-101	CRIMINOLOGY	4 CREDITS
CJA-130	INTRODUCTION TO CORRECTIONS	3 CREDITS
CJA-200	COMMUNITY POLICING	3 CREDITS
CJA-203	CRISIS INTERVENTION	3 CREDITS
CJA-212	CRIMINAL INVESTIGATION III	3 CREDITS
CJA-213	INTERVIEW & INTERROGATION	3 CREDITS
CJA-216	IMPLICIT BIAS AND POLICING	3 CREDITS
CJA-250	REPORTING, RECORDING & TESTIFYING	4 CREDITS
CJA-270	CRIMINAL JUSTICE CAPSTONE	3 CREDITS

CJA-280	CRIMINAL JUSTICE/CORRECTIONS/CWE	2-6 CREDITS
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### Dental Assistant

DA-106	CLINICAL PROCEDURES III	2 CREDITS
DA-106L	CLINICAL PROCEDURES III LAB	1 CREDIT
DA-130	CLINICAL PRACTICUM III	8 CREDITS
DA-135	PHARMACOLOGY/MEDICAL EMERGENCIES	2 CREDITS
DA-145	DENTAL OFFICE PROCEDURES	2 CREDITS

### Emergency Medical Technology

EMT-102	EMERGENCY MEDICAL TECHNICIAN PART II	6 CREDITS
EMT-105	INTRODUCTION TO EMERGENCY MEDICAL SERVICES	3 CREDITS
EMT-109	EMERGENCY RESPONSE COMMUNICATION/DOCUMENTATION	2 CREDITS

### English for Speakers of Other Languages

ESOL-012	BEGINNING ESOL	0 CREDIT
ESOL-013	BEGINNING ESOL	0 CREDIT
ESOL-015	BEGINNING READING, WRITING, AND GRAMMAR	0 CREDIT
ESOL-020	UPPER BEGINNING GRAMMAR	0 CREDIT
ESOL-022	UPPER BEGINNING CONVERSATION	0 CREDIT
ESOL-024	UPPER BEGINNING READING & WRITING	0 CREDIT
ESOL-030	INTERMEDIATE GRAMMAR A	0 CREDIT
ESOL-031	INTERMEDIATE GRAMMAR B	0 CREDIT
ESOL-032	INTERMEDIATE CONVERSATION 1	0 CREDIT
ESOL-034	INTERMEDIATE READING & WRITING	0 CREDIT
ESOL-042	UPPER INTERMEDIATE CONVERSATION 1	0 CREDIT
ESOL-044	UPPER INTERMEDIATE READING & WRITING	0 CREDIT
ESOL-046	EDITING FOR BETTER WRITING	0 CREDIT
ESOL-052	ADVANCED COMMUNICATION SKILLS 1	0 CREDIT
ESOL-054	ADVANCED READING & WRITING	0 CREDIT
ESOL-055	ADVANCED GRAMMAR C	0 CREDIT
ESOL-082	ASSESS/EVALUATE NEW STUDENTS	0 CREDIT
ESOL-083	EDUCATIONAL PLANNING FOR RETURNING STUDENTS	0 CREDIT

### Environmental Science

ESR-173	INTRODUCTION TO SUSTAINABILITY	4 CREDITS
ESR-173L	INTRODUCTION TO SUSTAINABILITY LAB	0 CREDIT

### Food & Nutrition

FN-110	PERSONAL NUTRITION	3 CREDITS
FN-225	NUTRITION	4 CREDITS

**General Development Education (GED)**

GED-011	GED IN ESPAÑOL	0 CREDIT
GED-015	GED PREPARATION	0 CREDIT
GED-049	LATINO GED & LIFE SKILLS	0 CREDIT

**Geology**

G-103	GENERAL GEOLOGY	4 CREDITS
G-103L	GENERAL GEOLOGY LAB	0 CREDIT
G-203	GENERAL GEOLOGY	4 CREDITS
G-203L	GENERAL GEOLOGY LAB	0 CREDIT

**Health**

HE-163	BODY & DRUGS I: INTRODUCTION TO ABUSE & ADDICTION	3 CREDITS
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**Health Professions**

HP-100	HEALTHCARE PROVIDER BLS/CPR, FIRST AID/BLOODBORNE PATHOGENS	1 CREDIT
HP-110	MEDICAL TERMINOLOGY	4 CREDITS
HP-120	INTRODUCTION TO HEALTH SCIENCES	3 CREDITS

**Human Services**

HS-216	GROUP COUNSELING SKILLS	3 CREDITS
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**Mathematics**

MTH-020ES	FUNDAMENTOS DE ARITMÉTICA II	4 CREDITS
MTH-060	ALGEBRA I	4 CREDITS
MTH-065	ALGEBRA II	4 CREDITS
MTH-095	ALGEBRA III	4 CREDITS

**Medical Assistant**

MA-100	INTRODUCTION TO MEDICAL ASSISTING	2 CREDITS
MA-166	PHLEBOTOMY II	1 CREDIT
MA-166L	PHLEBOTOMY II LAB	1 CREDIT
MA-174	CLINICAL LAB PROCEDURES II	1 CREDIT
MA-174L	CLINICAL LAB PROCEDURES II LAB	1 CREDIT
MA-178	MEDICAL ASSISTANT PRACTICUM	7 CREDITS

**Medical Billing and Coding**

MBC-116	INSURANCE BILLING AND REIMBURSEMENT II	4 CREDITS
MBC-125	ICD-10 CODING I	2 CREDITS
MBC-126	CPT/HCPCS CODING I	4 CREDITS

**Nursing**

NRS-111	FOUNDATIONS OF NURSING IN CHRONIC ILLNESS I	3 CREDITS
NRS-111C	FOUNDATIONS OF NURSING IN CHRONIC ILLNESS I CLINICAL	3 CREDITS
NRS-224	INTEGRATIVE PRACTICUM	2 CREDITS
NRS-224C	INTEGRATIVE PRACTICUM CLINICAL	7 CREDITS

NRS-233	PATHOPHYSIOLOGICAL PROCESSES II	3 CREDITS
NUR-100	NURSING ASSISTANT I	6.5 CREDITS
NUR-100C	NURSING ASSISTANT I CLINICAL	0 CREDIT

**Phlebotomy**

PHB-110	FUNDAMENTALS OF PHLEBOTOMY	5 CREDITS
PHB-112	PHLEBOTOMY TECHNIQUES	2 CREDITS
PHB-115	PROFESSIONALISM FOR PHLEBOTOMISTS	1 CREDIT

**Small Business Development Center**

SBM-010	REAL ESTATE BROKER LICENSE	0 CREDIT
SBM-011	PROPERTY MANAGEMENT PRE-LICENSE	0 CREDIT
XSBM-0003	GOING INTO BUSINESS	0 CREDIT
XSBM-0005	GOING OUT OF BUSINESS	0 CREDIT
XSBM-0010	PREPARING FOR THE CCB EXAM	0 CREDIT
XSBM-0011	QUICKBOOKS PRO: PART I	0 CREDIT
XSBM-0012	QUICKBOOKS PRO: PART II	0 CREDIT
XSBM-0024	CONSTRUCTION BUSINESS FUNDAMENTALS: ACCURATE ESTIMATING & FINANCIAL RECORDS	0 CREDIT

**Writing**

WR-121Z	COMPOSITION I	4 CREDITS
WR-122Z	COMPOSITION II	4 CREDITS
WR-227Z	TECHNICAL WRITING	4 CREDITS
WRD-098	INTRODUCTORY COLLEGE READING & WRITING 2	4 CREDITS

Course No	Course Title, Credits						
Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time				
Instructor	Tuition	Fee	Crs. Fee	Total			

# COURSE LISTING

*Credit and non-credit Courses offered Spring 2026*

## Adult Basic Education (ABE)

### ABE-012 ADULT BASIC EDUCATION, 0 CREDIT

Instruction offered to improve reading, writing, and math skills in order to transition to college classes, GED preparatory classes, or career related goal. Students must be 16 years or older. Required: Student Petition.

OC LCT	ABE-012-07	343928	MTWTH	10-11:50 AM			
	D. GREEN	\$0.00	\$0.00	\$55.00	\$55.00		
Required: Student Petition. Please call 503-594-3027 for orientation information.							

## Anthropology

### ANT-101 BIOLOGICAL ANTHROPOLOGY, 4 CREDITS

Introduces the study of humans as biocultural beings in the context of modern genetics, evolutionary theory, primate taxonomy, anatomy and behavior, fossil hominins, and the role of the biological anthropologist in forensic science.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

ONL NCT	ANT-101-01	343932					
	K. BACA	\$520.00	\$52.00	\$0.00	\$572.00		

### ANT-102 ARCHAEOLOGY & PREHISTORY, 4 CREDITS

Introduces the methods and theories used by archaeologists to study the development of human cultures. Provides a survey of world prehistory, tracing the transition of human societies from hunting and gathering to farming, to the beginning of urban life and the rise of early civilizations.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

OC NCT	ANT-102-01	343933	TTH	1-2:50 PM			
	K. BACA	\$520.00	\$52.00	\$0.00	\$572.00		

### ANT-103 CULTURAL ANTHROPOLOGY, 4 CREDITS

Introduces the diversity of contemporary human cultures and the ways anthropologists study and compare them in an effort to understand how different societies organize their lives and make sense of the world around them. Explores the interrelationships among the various elements of culture.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

OC NCT	ANT-103-01	343937	TTH	10-11:50 AM			
	K. BACA	\$520.00	\$52.00	\$0.00	\$572.00		
ONL NCT	ANT-103-02	343941					
	K. BACA	\$520.00	\$52.00	\$0.00	\$572.00		

### ANT-280 ANTHROPOLOGY/CWE, 2-6 CREDITS (VAR)

Cooperative work experience. Provides students with on-the-job work experience in the field of anthropology (may involve physical anthropology, and/or archaeology, and/or cultural anthropology). Required: Student Petition.

**Corequisites:** CWE-281

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

**Campus Locations:**  
**HAR:** Harmony Community Campus  
**OC:** Oregon City Campus  
**WILS:** Wilsonville Training Center  
**OFF:** Other Off-Campus Location

**Distance Education Notification:**  
**ONL:** Online Only  
**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

**Other Coding Translations:**  
**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

Course No	Course Title, Credits						
Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time				
Instructor	Tuition	Fee	Crs. Fee	Total			

OC NCT	ANT-280-01	343942					
	K. BACA	\$780.00	\$78.00	\$45.00	\$903.00V		
Required: Student Petition. Corequisite: Take the following CWE-281-06.							

## Art

### ART-100B CERAMIC TECHNIQUES, 1 CREDIT

Various topics will introduce techniques in clay construction, kiln construction, firing methods, glazing and/or ceramic methods. Students will create and fire work using clay and/or clay materials. Historical and contemporary ideas related to ceramics may be presented and discussed.

OC NCT	ART-100B-01	344087	F	4-7:00 PM			
			S	10-5:00 PM			
			SU	10-5:00 PM			
			S	1:30 -4:30 PM			
	C. BASKIN	\$130.00	\$13.00	\$50.00	\$193.00		
Focus on Soda Kiln Firing. Meets: 4/4-5/8.							

### ART-101 ART APPRECIATION, 3 CREDITS

Discover the fundamentals of thinking about and creating art through readings, class discussions, and gallery and museum (virtual) tours. This course will examine art, architecture, and design from the ancient period through the contemporary moment. The course also considers connections and relationships in art-making, history, and culture.

ONL NCT	ART-101-01	344089					
	C. SIEGFRIED	\$390.00	\$39.00	\$6.00	\$435.00		

### ART-115 BASIC DESIGN: 2-DIMENSIONAL DESIGN, 4 CREDITS

This course acquaints students with the elements and principles of design and basic color theory. Students develop compositional and analytical skills through projects and critiques. Students examine historical and contemporary issues and ideas related to visual composition and design across multiple fields of expression.

OC NCT	ART-115-01	344091	MW	1-3:50 PM			
	C. SIEGFRIED	\$520.00	\$52.00	\$80.00	\$652.00		
OC NCT	ART-115-02	344096	TTH	1-3:50 PM			
	R. KALMAN	\$520.00	\$52.00	\$80.00	\$652.00		

### ART-117 BASIC DESIGN: 3-DIMENSIONAL COMPOSITION, 4 CREDITS

Examine the elements of form, space, and structure. Create works of art using various processes. Examine historical and contemporary issues and ideas relating to sculpture and 3-dimensional design.

OC LCT NCT	ART-117-01	344098	MW	9-11:50 AM			
	K. SIMMONS	\$520.00	\$52.00	\$80.00	\$652.00		

### ART-120 CREATIVITY/IDEATION, 2 CREDITS

Have a great idea, want to further explore your ideas and creativity? Experience the process of generating ideas and developing creative problem-solving strategies. This course includes experimentation, collaboration, non-traditional methods and psychological aspects of creating and synthesizing ideas. This course is not just for artists, it is for everyone who wants to develop an idea.

OC HYB NCT	ART-120-01	344102	W	1-2:50 PM			
	N. BRODNICKI	\$260.00	\$26.00	\$32.00	\$318.00		

### ART-131 INTRODUCTION TO DRAWING, 4 CREDITS

Course No	Course Title, Credits					
Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time			
Instructor	Tuition	Fee	Crs. Fee	Total		
This course introduces students to basic skills, drawing tools, materials, techniques, and elements of composition; line, shape, and value. Projects will involve observational drawings of still lifes, landscapes, and the figural form. Assignments include drawings, assigned readings, video clips, and group critiques. Historical and contemporary issues of drawing will be examined.						
ONL NCT	<b>ART-131-01</b>	<b>344104</b>				
	A. SCHROER	\$520.00	\$52.00	\$80.00	\$652.00	
	Required: Pick up supplies on campus 4/2, 11:00-1:00pm.					
OC NCT	<b>ART-131-02</b>	<b>344105 MW</b>		<b>9-11:50 AM</b>		
	R. KALMAN	\$520.00	\$52.00	\$80.00	\$652.00	
OC NCT	<b>ART-131-03</b>	<b>344108 MW</b>		<b>1-3:50 PM</b>		
	R. KALMAN	\$520.00	\$52.00	\$80.00	\$652.00	

**ART-161 PHOTOGRAPHY I, 4 CREDITS**

Introduction to basic camera operation and basic darkroom processes in developing and printing film. Elements of composition, content, and historical reference will be explored.

**Required:** Access to a 35mm black and white camera with adjustable exposure controls (no digital cameras)

OC NCT	<b>ART-161-01</b>	<b>344111 TTH</b>		<b>1-3:50 PM</b>		
	C. GIFFEN	\$520.00	\$52.00	\$150.00	\$722.00	

**ART-162 PHOTOGRAPHY II, 4 CREDITS**

This course is the second of a sequence of three darkroom photography courses. This course explores camera operation and darkroom processes in developing and printing film. Photography II explores the photo processes and elements of composition, content, and historical/contemporary references at an intermediate level.

**Prerequisites:** ART-161

**Required:** Access to a 35mm black and white camera with adjustable exposure controls (no digital cameras)

OC NCT	<b>ART-162-01</b>	<b>344113 TTH</b>		<b>1-3:50 PM</b>		
	C. GIFFEN	\$520.00	\$52.00	\$150.00	\$722.00	

**ART-206 HISTORY OF ART/ENLIGHTENMENT THROUGH CONTEMPORARY, 4 CREDITS**

Examines art, culture, and history from the Enlightenment through the current century. This is a broad overview of art history that promotes an understanding of art and its history through readings, discussion, papers and exams.

**Recommended Prerequisites:** WR-121Z

ONL NCT	<b>ART-206-01</b>	<b>343612</b>				
	J. SIMONE	\$520.00	\$52.00	\$21.00	\$593.00	

**ART-233 DRAWING FOR COMICS, 4 CREDITS**

Utilize drawing skills, tools, materials, techniques, and elements of composition to create comics and sequential art. This course emphasizes the cultural and historical significance of storytelling, sequential art, and text-related imagery. The course includes discussion and lecture in addition to studio time.

**Prerequisites:** ART-131 or Student Petition

oc	<b>ART-233-01</b>	<b>348044 F</b>		<b>9-2:50 PM</b>		
	T. BLAS	\$520.00	\$52.00	\$80.00	\$652.00	

**ART-250 CERAMICS/BEGINNING, 4 CREDITS**

This course provides a broad general introduction to fundamental ceramic skills and experience, with assignments that foster artistic growth. Students explore different methods of working with clay, including pinching, coiling, slab construction, and throwing on the wheel and are introduced to glazing and firing methods. Students research the history of ceramics and its connection to culture and society.

OC NCT	<b>ART-250-01</b>	<b>344117 TTH</b>		<b>1-3:50 PM</b>		
	N. BRODNICKI	\$520.00	\$52.00	\$79.00	\$651.00	
OC NCT	<b>ART-250-02</b>	<b>344121 TTH</b>		<b>6-8:50 PM</b>		
	N. WARRENS	\$520.00	\$52.00	\$79.00	\$651.00	

**ART-252 CERAMICS/WHEEL-THROWING I, 4 CREDITS**

This course is an introduction to ceramic wheel-throwing methods through the creation of functional and artistic forms to develop fundamental skills and clay experience and foster artistic growth. Students are introduced to glazing and firing methods. Students research the history of ceramics and its connection to culture and society.

OC NCT	<b>ART-252-01</b>	<b>344124 TTH</b>		<b>9-11:50 AM</b>		
	N. BRODNICKI	\$520.00	\$52.00	\$79.00	\$651.00	

**ART-253 CERAMICS/INTERMEDIATE, 4 CREDITS**

In this course, students further develop ceramic skills and clay experience to foster artistic growth. Students explore and develop different methods of working with clay, including pinching, coiling, slab construction, and throwing on the wheel and refine glazing and firing methods. Students research the history of ceramics and its connection to culture and society.

**Prerequisites:** ART-250 or ART-252, or Student Petition

OC NCT	<b>ART-253-01</b>	<b>344126 TTH</b>		<b>1-3:50 PM</b>		
	N. BRODNICKI	\$520.00	\$52.00	\$79.00	\$651.00	
OC NCT	<b>ART-253-02</b>	<b>344127 TTH</b>		<b>6-8:50 PM</b>		
	N. WARRENS	\$520.00	\$52.00	\$79.00	\$651.00	

**ART-255 CERAMICS/WHEEL-THROWING II, 4 CREDITS**

This course continues the development of ceramic wheel-throwing methods through the creation of functional and artistic forms to develop skills and clay experience and foster artistic growth. Students explore glazing and firing methods. Students also examine the history of wheel thrown ceramics and its connection to culture and society.

**Prerequisites:** ART-252 or Student Petition

OC NCT	<b>ART-255-01</b>	<b>344128 TTH</b>		<b>9-11:50 AM</b>		
	N. BRODNICKI	\$520.00	\$52.00	\$79.00	\$651.00	

**ART-257 METALSMITHING/JEWELRY, 4 CREDITS**

Students will learn basic techniques and processes of metalsmithing, such as sawing, cold connection, soldering, metal inlay, fabrication, forming, surface treatments, and casting. Students will examine and research different cultural and historical small metals and jewelry forms. The focus of this class is the creation of small metal forms. Critiques, discussions and presentations are included in this course.

OC NCT	<b>ART-257-01</b>	<b>344131 TTH</b>		<b>9-11:50 AM</b>		
	J. IJIMA	\$520.00	\$52.00	\$80.00	\$652.00	

**ART-258 METALSMITHING/JEWELRY: INTERMEDIATE, 4 CREDITS**

**Campus Locations:**  
**HAR:** Harmony Community Campus  
**OC:** Oregon City Campus  
**WILS:** Wilsonville Training Center  
**OFF:** Other Off-Campus Location

**Distance Education Notification:**  
**ONL:** Online Only  
**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

**Other Coding Translations:**  
**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

This course continues the study of applied design principles in metalsmithing and jewelry-making, with an emphasis on creating original designs. Students will learn more advanced technical processes and engage in discussions about the relationship between jewelry/art metal and different fields. Students who aspire to pursue a career in the jewelry and metalsmithing trades will receive practical guidelines to help them achieve their goals.

**Prerequisites:** ART-257

OC NCT	<b>ART-258-01</b>	<b>344133 TTH</b>			<b>9-11:50 AM</b>	
	J. IJIMA		\$520.00	\$52.00	\$80.00	\$652.00

#### ART-261 PHOTOGRAPHY III, 4 CREDITS

This course is the third of a sequence of three darkroom photography courses. This course explores camera operation and darkroom processes in developing and printing film. Photography III explores the photo processes and elements of composition, content, and historical/contemporary references at an advanced level.

**Prerequisites:** ART-161 and ART-162

**Required:** Access to a 35mm black and white camera with adjustable exposure controls (no digital cameras)

OC NCT	<b>ART-261-01</b>	<b>344135 TTH</b>			<b>1-3:50 PM</b>	
	C. GIFFEN		\$520.00	\$52.00	\$80.00	\$652.00

#### ART-262 DIGITAL PHOTOGRAPHY & PHOTO-IMAGING, 4 CREDITS

Introduces concepts, techniques, practices, aesthetics and ethics of photographic imaging and image-making with digital technology. Students will use imaging software.

**Required:** Access to a digital camera with adjustable exposure controls

ONL NCT	<b>ART-262-01</b>	<b>344136</b>				
	S. ELIOT		\$520.00	\$52.00	\$80.00	\$652.00
OC NCT	<b>ART-262-02</b>	<b>344139 TTH</b>			<b>9-11:50 AM</b>	
	D. OLSEN		\$520.00	\$52.00	\$80.00	\$652.00

#### ART-283 PAINTING: LANDSCAPES/BEGINNING, 4 CREDITS

Introduces basic painting tools, materials, techniques, and elements of composition, color, value and space. Projects involve observational painting with a focus on landscape and its relationship to volume and form on a two-dimensional plane. Course includes painting, readings and group critiques.

**Prerequisites:** ART-131 or Student Petition

OC NCT	<b>ART-283-01</b>	<b>344142 MW</b>			<b>9-11:50 AM</b>	
	A. SCHROER		\$520.00	\$52.00	\$110.00	\$682.00

#### ART-286 PAINTING: LANDSCAPES/INTERMEDIATE, 4 CREDITS

Learn intermediate painting tools, materials, techniques, and elements of composition, color, value and space. Projects involve observational painting with a focus on landscape and its relationship to volume and form on a two-dimensional plane. Course includes painting, readings and group critiques.

**Prerequisites:** ART-283 or Student Petition

OC NCT	<b>ART-286-01</b>	<b>344143 MW</b>			<b>9-11:50 AM</b>	
	A. SCHROER		\$520.00	\$52.00	\$110.00	\$682.00

#### ART-293 SCULPTURE (METAL EMPHASIS), 4 CREDITS

The processes and concepts of sculpture including the elements of form, space and visual communication will be examined with emphasis on current issues. Use of clay and plaster in relation to metal sculpture. Welding, casting, and assemblage will be explored. Historical and contemporary ideas and aesthetic content will be examined.

Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

OC NCT	<b>ART-293-01</b>	<b>344144 MW</b>			<b>1-3:50 PM</b>	
	K. SIMMONS		\$520.00	\$52.00	\$80.00	\$652.00

### Auto Body/Collision Repair and Refinishing

*Must have ANSI approved eye protection first day and comply with College safety policy.*

#### AB-112 COLLISION REPAIR WELDING I, 2 CREDITS

This class focuses on auto collision damage repair. Emphasis is on Metal Inert Gas (MIG), Gas Metal Arc Welding (GMAW), welding on light gauge metals, and oxygen-acetylene cutting.

OC NCT	<b>AB-112-01</b>	<b>344002 F</b>			<b>8-12:20 PM</b>	
	C. DAHLSTRUD- RIVERA J. PHELPS		\$260.00	\$26.00	\$230.00	\$516.00

#### AB-113 COLLISION REPAIR I/NONSTRUCTURAL, 6 CREDITS

Provides basic instruction in collision repairs, including shop safety and chemical hazard safety; proper and safe use of tools; basic metal work and finishing; use of filler; door removal, replacement and alignment; and replacement and alignment of bolt-on front end sheet metal parts.

**Prerequisite or Corequisite:** AB-112 and ABR-125

OC NCT	<b>AB-113-01</b>	<b>344004 MT</b>			<b>7-12:20 PM</b>	
	M. GRIFFITH M. HOUSE		\$780.00	\$78.00	\$337.00	\$1,195.00

#### AB-123 COLLISION REPAIR WELDING II, 2 CREDITS

Training in light gauge metal repair: Gas Metal Arc Welding (GMAW), Plasma Arc Cutting (PAC), Squeeze Type Resistance Spot Welding (ST-RSW), and other advanced welding techniques specific to collision damage repair.

**Prerequisites:** AB-112

OC NCT	<b>AB-123-01</b>	<b>344006 F</b>			<b>8-12:20 PM</b>	
	C. DAHLSTRUD- RIVERA J. PHELPS		\$260.00	\$26.00	\$158.00	\$444.00

#### AB-133 COLLISION REPAIR II/STRUCTURAL, 6 CREDITS

Repair major body damage using modern frame repair equipment. Includes repair and replacement of bolt-on, bonded, and welded components using the latest technology. Includes introduction to computerized measuring and damage analysis.

**Prerequisites:** AB-113

OC NCT	<b>AB-133-01</b>	<b>344008 MT</b>			<b>7-12:20 PM</b>	
	M. GRIFFITH M. HOUSE		\$780.00	\$78.00	\$337.00	\$1,195.00

#### AB-151 COLLISION REPAIR COMPUTERIZED ESTIMATING - CCC ONE, 2 CREDITS

Provides detailed instruction in the use of modern computerized estimating systems in the collision repair field. Focus is on CCC ONE software.

**Prerequisites:** AB-149

OC LCT	<b>AB-151-01</b>	<b>344009 MW</b>			<b>1:30 -3:20 PM</b>	
	A. YAGER-ROUNDS		\$260.00	\$26.00	\$154.00	\$440.00

#### AB-222 COLLISION REPAIR III/ADVANCED STRUCTURAL, 6 CREDITS

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**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
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## 2026/SP

<b>Campus Locations:</b> <b>HAR:</b> Harmony Community Campus <b>OC:</b> Oregon City Campus <b>WILS:</b> Wilsonville Training Center <b>OFF:</b> Other Off-Campus Location	<b>Distance Education Notification:</b> <b>ONL:</b> Online Only <b>REM:</b> Remote (w/ scheduled meetings) <b>HYB:</b> In-person plus online work	<b>Other Coding Translations:</b> <b>TBA:</b> To be arranged: contact department first class <b>VAR:</b> Variable credit class	<b>ESPAÑOL:</b> Enseñado en español <b>LCT:</b> Low-Cost Text <b>NCT:</b> No-Cost Text
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Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

This course is designed to provide students with the entry-level skills necessary to repair automobile fuel delivery and emission systems. Includes general engine diagnosis; fuel, air induction, and exhaust systems diagnosis and repair; emission control systems diagnosis and repair. Introduction to the diagnostic process, scan tools, and oscilloscopes.

**Prerequisites:** MTH-020 or placement in MTH-050, and placement in WRD-090

**Recommended Prerequisites:** AM-101 with a C or better, or Student Petition

oc	<b>AM-142-01</b>	<b>344069</b>	<b>MTWTH</b>		<b>1-5:50 PM</b>	
	J. LEUCK		\$650.00	\$65.00	\$211.00	\$926.00
	Meets: 4/6-5/7.					
oc	<b>AM-142-02</b>	<b>344073</b>	<b>MTWTH</b>		<b>1-5:50 PM</b>	
	J. LEUCK		\$650.00	\$65.00	\$211.00	\$926.00
	Meets: 5/11-6/11.					

### AM-223 ALTERNATIVE FUELS TRANSPORTATION TECHNOLOGY, 5 CREDITS

Provides students with knowledge of theory and physical description of hybrid, Electric, Fuel cell vehicles. The student will have the opportunity to acquire practical experience in the area of diagnosing and repairing alternative fuel transportation vehicles.

**Prerequisites:** AM-129

oc	<b>AM-223-01</b>	<b>344075</b>	<b>MTWTH</b>		<b>7-11:50 AM</b>	
	N. ROBERTS		\$650.00	\$65.00	\$124.00	\$839.00
	Meets: 3/30-4/30.					
oc	<b>AM-223-02</b>	<b>344079</b>	<b>MTWTH</b>		<b>7-11:50 AM</b>	
	N. ROBERTS		\$650.00	\$65.00	\$124.00	\$839.00
	Meets: 5/4-6/4.					

### AM-225 SAFETY SYSTEMS, 5 CREDITS

In this course students will be introduced to existing vehicle on-board safety systems and Advanced Driver Assist Systems (ADAS) on today's vehicles. Safety systems such as Anti-lock brakes, Traction control, Air-bag systems, Stability control, and Advanced Driver Assist Systems will be explained, demonstrated, and tested.

**Prerequisites:** AM-129

oc	<b>AM-225-01</b>	<b>344081</b>	<b>MTWTH</b>		<b>7-11:50 AM</b>	
	D. BLACKMON		\$650.00	\$65.00	\$211.00	\$926.00
	Meets: 3/30-4/30.					
oc	<b>AM-225-02</b>	<b>344083</b>	<b>MTWTH</b>		<b>7-11:50 AM</b>	
	D. BLACKMON		\$650.00	\$65.00	\$211.00	\$926.00
	Meets: 5/4-6/4.					

### AM-228 SERVICE SHOP MANAGEMENT, 4 CREDITS

Course designed to familiarize students with the responsibilities of the parts manager, service manager and service writer and the day to day responsibilities of operating a business.

**Prerequisites:** MTH-020 with a C or better, or placement in MTH-050 or higher

oc	<b>AM-228-01</b>	<b>344084</b>	<b>T</b>		<b>6-9:50 PM</b>	
	W. VAN RIPER		\$520.00	\$52.00	\$99.00	\$671.00

### AM-280 AUTO MECHANICS/CWE, 1-6 CREDITS (VAR)

Cooperative work experience. Work-related learning experience in an auto repair shop or auto dealership. Required: Student Petition.

**Corequisites:** CWE-281

Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

OC NCT	<b>AM-280-01</b>	<b>344085</b>				
	N. ROBERTS		\$780.00	\$78.00	\$45.00	\$903.00V
	Required: Student Petition. Corequisite: Take the following CWE-281-06.					

## Biology

### BI-101 GENERAL BIOLOGY; CELLULAR BIOLOGY, 4 CREDITS

An inquiry-based laboratory course focusing on cellular biology, genetics, epigenetics, biotechnology and natural selection. Class uses student centered activities in a collaborative learning environment to enhance appreciation of the biological world.

**Corequisites:** BI-101L

**Recommended Prerequisites:** MTH-060 or MTH-098 or placement in MTH-065; and WRD-098 or placement in WR-121Z

ONL	<b>BI-101-40</b>	<b>344145</b>				
	E. DEBEY		\$520.00	\$52.00	\$55.00	\$627.00
	Corequisite: Take the following BI-101L-40.					
ONL	<b>BI-101-41</b>	<b>344149</b>				
	E. DEBEY		\$520.00	\$52.00	\$55.00	\$627.00
	Corequisite: Take the following BI-101L-41.					

### BI-101L GENERAL BIOLOGY; CELLULAR BIOLOGY LAB, 0 CREDIT

Lab course for BI-101

**Corequisites:** BI-101

ONL	<b>BI-101L-40</b>	<b>344151</b>				
	E. DEBEY		\$0.00	\$0.00	\$0.00	\$0.00
	Corequisite: Take the following BI-101-40.					
ONL	<b>BI-101L-41</b>	<b>344153</b>				
	E. DEBEY		\$0.00	\$0.00	\$0.00	\$0.00
	Corequisite: Take the following BI-101-41.					

### BI-102 GENERAL BIOLOGY; ANIMAL SYSTEMS, 4 CREDITS

An inquiry-based laboratory course focusing on human and animal body systems; including teratogens, Hox genes and hormone mimics in embryonic development. Activities emphasize comparisons across animal phyla to better understand the diversity of life. The class uses student centered activities in a collaborative learning environment to enhance appreciation of the animal kingdom.

**Corequisites:** BI-102L

**Recommended Prerequisites:** MTH-060 or MTH-098 or placement in MTH-065; and WRD-098 or placement in WR-121Z

oc	<b>BI-102-01</b>	<b>344154</b>	<b>MW</b>		<b>2-3:20 PM</b>	
	S. SOLL		\$520.00	\$52.00	\$55.00	\$627.00
	Corequisite: Take the following BI-102L-01.					
ONL	<b>BI-102-40</b>	<b>344155</b>				
	S. SOLL		\$520.00	\$52.00	\$55.00	\$627.00
	Corequisite: Take the following BI-102L-40.					
ONL	<b>BI-102-41</b>	<b>344157</b>				
	T. BLACKWELL		\$520.00	\$52.00	\$55.00	\$627.00
	Corequisite: Take the following BI-102L-41.					

### BI-102L GENERAL BIOLOGY; ANIMAL SYSTEMS LAB, 0 CREDIT

Lab course for BI-102

**Corequisites:** BI-102

oc	<b>BI-102L-01</b>	<b>344158</b>	<b>MW</b>		<b>3:30 -4:50 PM</b>	
	S. SOLL		\$0.00	\$0.00	\$0.00	\$0.00
	Corequisite: Take the following BI-102-01.					

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# Course Listing

2026/SP

Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
ONL	<b>BI-102L-40 344162</b> S. SOLL Corequisite: Take the following BI-102-40.					\$0.00	\$0.00	\$0.00		\$0.00
ONL	<b>BI-102L-41 344163</b> TBA Corequisite: Take the following BI-102-41.					\$0.00	\$0.00	\$0.00		\$0.00
<b>BI-103</b>	<b>GENERAL BIOLOGY; PLANTS &amp; THE ECOSYSTEM, 4 CREDITS</b>  An inquiry-based laboratory course focusing on plants and the ecosystem; including plant identification, population dynamics, productivity and energy flow. Activities include an integrated approach to understanding environmental issues and the impact of humans on the biosphere. The class uses student centered activities in a collaborative learning environment to enhance appreciation of the biological world. <b>Corequisites:</b> BI-103L <b>Recommended Prerequisites:</b> MTH-060 or MTH-098 or placement in MTH-065; and WRD-098 or placement in WR-121Z									
OC	<b>BI-103-01 344165 TTH</b> E. DEBEY Corequisite: Take the following BI-103L-01.					\$520.00	\$52.00	\$55.00	9-10:20 AM	\$627.00
ONL	<b>BI-103-40 344171</b> TBA Corequisite: Take the following BI-103L-40.					\$520.00	\$52.00	\$55.00		\$627.00
<b>BI-103L</b>	<b>GENERAL BIOLOGY; PLANTS &amp; THE ECOSYSTEM LAB, 0 CREDIT</b>  Lab course for BI-103 <b>Corequisites:</b> BI-103									
OC	<b>BI-103L-01 344172 TTH</b> E. DEBEY Corequisite: Take the following BI-103-01.					\$0.00	\$0.00	\$0.00	10:30 -11:50 AM	\$0.00
ONL	<b>BI-103L-40 344179</b> TBA Corequisite: Take the following BI-103-40.					\$0.00	\$0.00	\$0.00		\$0.00
<b>BI-112</b>	<b>GENERAL BIOLOGY FOR HEALTH SCIENCES, 4 CREDITS</b>  A one-term preparatory course that introduces the Health Occupations student to the scientific method, molecular and cellular biology, principles of inheritance, homeostasis, natural selection, tissues, and organ systems. Topics and skills covered prepare students to enter BI-231 and BI-234. <b>Corequisites:</b> BI-112L <b>Recommended Corequisite:</b> CH-112 <b>Recommended Prerequisites:</b> MTH-060 or MTH-098 or placement in MTH-065, and WRD-098 or placement in WR-121Z									
OC	<b>BI-112-01 344181 TTH</b> J. BOWN Corequisite: Take 1 of the following BI-112L-01, BI-112L-02.					\$520.00	\$52.00	\$55.00	11-12:20 PM	\$627.00
HAR	<b>BI-112-15 344183 MW</b> TBA Corequisite: Take the following BI-112L-15.					\$520.00	\$52.00	\$55.00	9-10:20 AM	\$627.00
ONL	<b>BI-112-20 344184</b> TBA Corequisite: Take the following BI-112L-20.					\$520.00	\$52.00	\$55.00		\$627.00
ONL	<b>BI-112-40 344185</b> TBA Corequisite: Take the following BI-112L-40.					\$520.00	\$52.00	\$55.00		\$627.00
<b>BI-112L</b>	<b>GENERAL BIOLOGY FOR HEALTH SCIENCES LAB, 0 CREDIT</b>  Lab course for BI-112 <b>Corequisites:</b> BI-112									
OC	<b>BI-112L-01 344187 T</b> TBA Corequisite: Take the following BI-112-01.					\$0.00	\$0.00	\$0.00	1-3:50 PM	\$0.00
OC	<b>BI-112L-02 344189 TH</b> J. BOWN Corequisite: Take the following BI-112-01.					\$0.00	\$0.00	\$0.00	8-10:50 AM	\$0.00
HAR	<b>BI-112L-15 344190 MW</b> TBA Corequisite: Take the following BI-112-15.					\$0.00	\$0.00	\$0.00	10:30 -11:50 AM	\$0.00
OC	<b>BI-112L-20 344191 W</b> TBA Corequisite: Take the following BI-112-20.					\$0.00	\$0.00	\$0.00	6:30 -9:20 PM	\$0.00
ONL	<b>BI-112L-40 344192</b> TBA Corequisite: Take the following BI-112-40.					\$0.00	\$0.00	\$0.00		\$0.00
<b>BI-120</b>	<b>INTRODUCTION TO HUMAN ANATOMY AND PHYSIOLOGY, 4 CREDITS</b>  This course is designed to serve students as an overview introductory course to human anatomy and physiology. Material covered includes the structure and function of the human body. Basic chemistry and cell structures are covered, as well as the organization of tissues, organs, and organ systems. Correlations can then be made between this material and disease states commonly encountered in health care. Dissection of animal tissues is required. <b>Corequisites:</b> BI-120L									
HAR	<b>BI-120-15 344193 MW</b> TBA					\$520.00	\$52.00	\$55.00	1-2:20 PM	\$627.00
<b>BI-120L</b>	<b>INTRODUCTION TO HUMAN ANATOMY AND PHYSIOLOGY LAB, 0 CREDIT</b>  Lab course for BI-120 <b>Corequisites:</b> BI-120									
HAR	<b>BI-120L-15 344194 MW</b> TBA					\$0.00	\$0.00	\$0.00	2:30 -3:50 PM	\$0.00
<b>BI-160</b>	<b>BIRD IDENTIFICATION &amp; TAXONOMY, 3 CREDITS</b>  Lecture course introducing bird taxonomy, evolution, anatomy and physiology, identification, and behaviors. Identification techniques applied to regional birds through lectures, slides and other activities.									
OC LCT	<b>BI-160-20 344197 T</b> J. BOWN					\$390.00	\$39.00	\$20.00	6-8:50 PM	\$449.00
<b>BI-160L</b>	<b>BIRD IDENTIFICATION &amp; TAXONOMY WITH LAB, 4 CREDITS</b>  Lecture course introducing bird taxonomy, evolution, anatomy and physiology, identification, and behaviors. Identification techniques applied to regional birds through lectures, slides and other activities. Includes field identification of common Oregon birds by sight, sound, and habitat. Field trips required along with online research.									
OC LCT	<b>BI-160L-20 344198 T</b> J. BOWN Field trip dates: Apr 18, May 2, and May 30.					\$520.00	\$52.00	\$60.00	6-8:50 PM	\$632.00

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## Course Listing

2026/SP

Course No	Course Title, Credits					
	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time		
	Instructor	Tuition	Fee	Crs. Fee	Total	
OC	<b>BI-160L-21</b> 344199 T J. BOWN	\$520.00	\$52.00	\$255.00	\$827.00	
Required: Student Petition. Required field trip May 14-17, 2026 to Malheur Field Station.						

### BI-163 MALHEUR FIELD TRIP, 1 CREDIT

Four day field trip. Study of plants, animals, geology, and history of the Northern Basin and Range ecoregion at the Malheur Environmental Field Station in southeast Oregon. Required: Student Petition.

Required: Field trip

OFF	<b>BI-163-01</b> 344200 TBA J. BOWN	\$130.00	\$13.00	\$250.00	\$393.00	
Required: Student Petition. Meets: May 14-17, 2026. Field Trip to Malheur Field Station.						

### BI-217 GENERAL ZOOLOGY, 4 CREDITS

A lab course covering diversity of the more complex invertebrate and vertebrate animal phyla. Includes animal anatomy/physiology, animal behavior, distribution, ecology and conservation.

Corequisites: BI-217L

Prerequisites: MTH-095 with a C or better or placement in MTH-111Z

Recommended Prerequisites: WRD-098 or placement in WR-121Z

OC	<b>BI-217-01</b> 347958 MW J. BOWN	\$520.00	\$52.00	\$55.00	\$627.00	
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### BI-217L GENERAL ZOOLOGY LAB, 0 CREDIT

Lab course for BI-217

Corequisites: BI-217

OC	<b>BI-217L-01</b> 348021 W J. BOWN	\$0.00	\$0.00	\$0.00	\$0.00	
Corequisite: Take the following BI-217-01.						

### BI-223LZ PRINCIPLES OF BIOLOGY: ECOLOGY AND EVOLUTION LAB, 0 CREDIT

Lab course for BI-223Z

Corequisites: BI-223Z

OC	<b>BI-223LZ-01</b> 344204 TH T. BLACKWELL	\$0.00	\$0.00	\$0.00	\$0.00	
Corequisite: Take 1 of the following BI-223Z-01, BI-223Z-02.						
OC	<b>BI-223LZ-02</b> 344205 TH T. BLACKWELL	\$0.00	\$0.00	\$0.00	\$0.00	
Corequisite: Take 1 of the following BI-223Z-01, BI-223Z-02.						

### BI-223Z PRINCIPLES OF BIOLOGY: ECOLOGY AND EVOLUTION, 5 CREDITS

Explores the unity and diversity of life through evolutionary mechanisms and relationships, and adaptation to the environment. Examines population, community, and ecosystem ecology. Intended for science majors.

Corequisites: BI-223LZ

Prerequisite or Corequisite: CH-105, or CH-222Z and CH-228Z

OC	<b>BI-223Z-01</b> 344201 MW T. BLACKWELL	\$650.00	\$65.00	\$55.00	\$770.00	
Corequisite: Take 1 of the following BI-223LZ-01, BI-223LZ-02.						
ONL	<b>BI-223Z-02</b> 344203 T. BLACKWELL	\$650.00	\$65.00	\$55.00	\$770.00	
This section has an in-person lab requirement. Corequisite: Take 1 of the following BI-223LZ-01, BI-223LZ-02.						

Course No	Course Title, Credits					
	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time		
	Instructor	Tuition	Fee	Crs. Fee	Total	

### BI-231 HUMAN ANATOMY & PHYSIOLOGY I, 4 CREDITS

A lab course designed for students entering the physical education or medically-related fields. Includes body organization, terminology, tissues and systemic study of the integumentary, skeletal and nervous systems. Animal organ dissection required.

Prerequisites: BI-112 (preferred), or BI-101 and BI-102, or BI-221Z

Corequisites: BI-231L

Prerequisites: CH-112 (preferred), or CH-104 and CH-105, or CH-221Z, CH-227Z, CH-222Z and CH-228Z

OC HYB	<b>BI-231-01</b> 344206 M B. KOP	\$520.00	\$52.00	\$55.00	\$627.00	
Corequisite: Take 1 of the following BI-231L-01, BI-231L-02.						

### BI-231L HUMAN ANATOMY & PHYSIOLOGY I LAB, 0 CREDIT

Lab course for BI-231

Corequisites: BI-231

OC	<b>BI-231L-01</b> 344211 M J. GALLEGOS	\$0.00	\$0.00	\$0.00	\$0.00	
OC	<b>BI-231L-02</b> 344213 W J. GALLEGOS	\$0.00	\$0.00	\$0.00	\$0.00	

### BI-232 HUMAN ANATOMY & PHYSIOLOGY II, 4 CREDITS

Lab course covering structure and function of the muscular, cardiovascular, lymphatic, and respiratory systems. Animal organ dissection required.

Prerequisites: BI-231 with a C or better

Corequisites: BI-232L

OC HYB	<b>BI-232-01</b> 344214 T B. KOP	\$520.00	\$52.00	\$55.00	\$627.00	
Corequisite: Take the following BI-232L-01.						
OC HYB	<b>BI-232-20</b> 344216 T B. KOP	\$520.00	\$52.00	\$55.00	\$627.00	
Corequisite: Take the following BI-232L-20.						

### BI-232L HUMAN ANATOMY & PHYSIOLOGY II LAB, 0 CREDIT

Lab course for BI-232

Corequisites: BI-232

OC	<b>BI-232L-01</b> 344217 TH J. GALLEGOS	\$0.00	\$0.00	\$0.00	\$0.00	
Corequisite: Take the following BI-232-01.						
OC	<b>BI-232L-20</b> 344222 TH J. GALLEGOS	\$0.00	\$0.00	\$0.00	\$0.00	
Corequisite: Take the following BI-232-20.						

### BI-233 HUMAN ANATOMY & PHYSIOLOGY III, 4 CREDITS

Lab course covering neuroendocrine control, digestive, excretory and reproductive systems. Study of fluid, electrolyte and acid-base balance. Animal organ dissection required.

Prerequisites: BI-232 with a C or better

Corequisites: BI-233L

OC	<b>BI-233-01</b> 344225 M M. PATTERSON	\$520.00	\$52.00	\$55.00	\$627.00	
Corequisite: Take the following BI-233L-01.						
HAR	<b>BI-233-15</b> 344232 TTH M. PATTERSON	\$520.00	\$52.00	\$55.00	\$627.00	
Corequisite: Take the following BI-233L-15.						
OC HYB	<b>BI-233-20</b> 344233 M B. KOP	\$520.00	\$52.00	\$55.00	\$627.00	
Corequisite: Take the following BI-233L-20.						

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**Other Coding Translations:**  
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VAR: Variable credit class

**ESPAÑOL:** Enseñado en español  
LCT: Low-Cost Text  
NCT: No-Cost Text



Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
<b>BI-233L</b>	<b>HUMAN ANATOMY &amp; PHYSIOLOGY III LAB, 0 CREDIT</b>									
	Lab course for BI-233									
<b>Corequisites:</b> BI-233										
OC	<b>BI-233L-01</b>	<b>344234</b>	<b>M</b>		<b>1-3:50 PM</b>					
	M. PATTERSON	\$0.00	\$0.00	\$0.00		\$0.00				
	Corequisite: Take the following BI-233-01.									
HAR	<b>BI-233L-15</b>	<b>344237</b>	<b>TTH</b>		<b>10:30 -11:50 AM</b>					
	M. PATTERSON	\$0.00	\$0.00	\$0.00		\$0.00				
	Corequisite: Take the following BI-233-15.									
OC	<b>BI-233L-20</b>	<b>344239</b>	<b>W</b>		<b>6:30 -9:20 PM</b>					
	M. PATTERSON	\$0.00	\$0.00	\$0.00		\$0.00				
	Corequisite: Take the following BI-233-20.									

**BI-234 INTRODUCTORY MICROBIOLOGY, 4 CREDITS**

An introductory microbiology lab course required for health science and science majors. Includes characteristics, physiology and growth requirements of microorganisms, interactions between humans and microorganisms, immunology, infection, and principles of microbial control. This course emphasizes critical thinking and analytical skills in a collaborative laboratory environment.

**Prerequisites:** BI-101, BI-112 or BI-221Z

**Corequisites:** BI-234L

**Prerequisites:** CH-104, CH-112, or CH-221Z and CH-227Z

OC LCT	<b>BI-234-01</b>	<b>344241</b>	<b>TTH</b>		<b>2-3:20 PM</b>					
	S. SOLL	\$520.00	\$52.00	\$55.00		\$627.00				
	Corequisite: Take the following BI-234L-01.									
ONL	<b>BI-234-40</b>	<b>344245</b>								
	TBA	\$520.00	\$52.00	\$170.00		\$742.00				
	Corequisite: Take the following BI-234L-40.									

**BI-234L INTRODUCTORY MICROBIOLOGY LAB, 0 CREDIT**

Lab course for BI-234

**Corequisites:** BI-234

OC	<b>BI-234L-01</b>	<b>344246</b>	<b>TTH</b>		<b>3:30 -4:50 PM</b>					
	S. SOLL	\$0.00	\$0.00	\$0.00		\$0.00				
	Corequisite: Take the following BI-234-01.									
ONL	<b>BI-234L-40</b>	<b>344251</b>								
	TBA	\$0.00	\$0.00	\$0.00		\$0.00				
	Corequisite: Take the following BI-234-40.									

**Business Administration****BA-101Z INTRODUCTION TO BUSINESS, 4 CREDITS**

Presents an integrated view of both established and entrepreneurial businesses by studying their common characteristics and processes in a global context. Introduces theory and develops basic skills in the areas of accounting, finance, management, and marketing, with an emphasis on social responsibility and ethical practices. Explores how businesses can create value for themselves and society by addressing environmental and social challenges.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

OC LCT	<b>BA-101Z-01</b>	<b>344141</b>	<b>MW</b>		<b>10-11:50 AM</b>					
	J. EICHENBERGER	\$520.00	\$52.00	\$5.00		\$577.00				
OC HYB LCT	<b>BA-101Z-02</b>	<b>344146</b>	<b>W</b>		<b>1-2:50 PM</b>					
	J. EICHENBERGER	\$520.00	\$52.00	\$5.00		\$577.00				
ONL LCT	<b>BA-101Z-03</b>	<b>344147</b>								
	S. RAHN	\$520.00	\$52.00	\$44.38		\$616.38				
	Online textbook included in section fees.									

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ONL LCT	<b>BA-101Z-04</b>	<b>344148</b>								
	K. HEINIG	\$520.00	\$52.00	\$44.38		\$616.38				
	Online textbook included in section fees.									
ONL LCT	<b>BA-101Z-05</b>	<b>344150</b>								
	K. HEINIG	\$520.00	\$52.00	\$44.38		\$616.38				
	Online textbook included in section fees.									
<b>BA-103</b>	<b>BUSINESS STRATEGIES FOR COMPUTER CONSULTANTS, 3 CREDITS</b>									
Class introduces the procedures for establishing and developing a successful consulting business in computer-related services including web development, network support, and computer support.										
ONL	<b>BA-103-30</b>	<b>347998</b>								
	M. SORRENTINO	\$390.00	\$39.00	\$0.00		\$429.00				

**BA-111 GENERAL ACCOUNTING I, 3 CREDITS**

Introduces the terminology and processes of full-cycle, modified cash and accrual basis bookkeeping for small service and merchandising businesses with inventory. Focus is on how to analyze and record financial transactions, reconcile accounts and trial balances, and prepare basic financial statements. Additional topics include cash management, bank reconciliations, accounting for sales and purchase discounts. Emphasizes procedure and practice.

**Recommended Prerequisite or Corequisite:** BA-101Z and BA-131

**Recommended Prerequisites:** Placement in MTH-020

OC HYB	<b>BA-111-01</b>	<b>344159</b>	<b>T</b>		<b>1-2:50 PM</b>					
	L. LEWIS	\$390.00	\$39.00	\$134.99		\$563.99				
	Online textbook included in section fees.									
ONL	<b>BA-111-02</b>	<b>347999</b>								
	J. SAN-CLAIRE	\$390.00	\$39.00	\$134.99		\$563.99				
	Online textbook included in section fees.									

**BA-112 GENERAL ACCOUNTING II, 4 CREDITS**

Provides a more in-depth look at general accounting principles and practices for small business. Topics include payroll, recording bad debt, notes receivable and payable, inventory adjustment, and long-term asset valuation. Accounting practices for partnerships and manufacturing structures are examined, and financial analysis is introduced as a tool for evaluating the health and wealth of a business.

**Prerequisites:** BA-111 or BA-211Z

**Prerequisite or Corequisite:** BA-131 or some knowledge of Excel

OC HYB	<b>BA-112-01</b>	<b>344160</b>	<b>W</b>		<b>9-11:50 AM</b>					
	J. SAN-CLAIRE	\$520.00	\$52.00	\$134.99		\$706.99				
	Online textbook included in section fees.									

**BA-119 PROJECT MANAGEMENT PRACTICES, 2 CREDITS**

Basic course in project management, intended for non-project management students. Students gain a basic understanding of project management principles and techniques, with emphasis on scope planning, scheduling, and resource management. Students learn practical application of cost control, time management, and communication in project environments.

ONL LCT	<b>BA-119-01</b>	<b>344161</b>								
	C. PLOWMAN	\$260.00	\$26.00	\$5.00		\$291.00				

**BA-120 PROJECT MANAGEMENT FUNDAMENTALS, 4 CREDITS**

Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
ONL	<b>BA-120-01</b> <b>344164</b> S. RAHN					\$520.00	\$52.00	\$5.00		\$577.00
<b>BA-125 PROJECT MANAGEMENT PREP, 5 CREDITS</b>										
Tools and processes employed in the project knowledge areas of project communication, risk, procurement, and quality. Major topics include project communication planning and preferred communication channels and approaches; risk assessment and risk management in a project environment; project procurement planning and management with an emphasis on contract types and contract awards and administration; and approaches to project quality planning, quality assurance, control and improvement.										
<b>Prerequisite or Corequisite:</b> BA-120										
ONL	<b>BA-125-01</b> <b>344166</b> S. RAHN					\$650.00	\$65.00	\$5.00		\$720.00
<b>BA-131 INTRODUCTION TO BUSINESS COMPUTING, 4 CREDITS</b>										
Introductory course using Microsoft Word, Excel, Access, and PowerPoint applications to create business documents.										
<b>Required:</b> Access to the following: personal computer or laptop with MS Windows Operating System (Windows 10 or 11), Office 365 OR MS Office 2021, internet access (including email), or access to the CCC Dye Academic Computer Lab for completion of coursework										
<b>Recommended Prerequisites:</b> WRD-090 or placement in WRD-098										
OC	<b>BA-131-01</b> <b>344168 MW</b> <b>1-2:50 PM</b> F. MEYERS					\$520.00	\$52.00	\$130.00		\$702.00
Office 2021 version is used. Online textbook included in section fees.										
OC HYB	<b>BA-131-02</b> <b>344170 W</b> <b>10-11:50 AM</b> F. MEYERS					\$520.00	\$52.00	\$130.00		\$702.00
Office 2021 version is used. Online textbook included in section fees.										
OC HYB	<b>BA-131-03</b> <b>344173 M</b> <b>10-11:50 AM</b> F. MEYERS					\$520.00	\$52.00	\$130.00		\$702.00
Office 2021 version is used. Online textbook included in section fees.										
ONL	<b>BA-131-04</b> <b>344174</b> B. FORNEY					\$520.00	\$52.00	\$130.00		\$702.00
Office 2021 version is used. Online textbook included in section fees.										
ONL	<b>BA-131-05</b> <b>344175</b> D. HEINIG					\$520.00	\$52.00	\$130.00		\$702.00
Office 2021 version is used. Online textbook included in section fees.										
ONL	<b>BA-131-06</b> <b>344177</b> D. HEINIG					\$520.00	\$52.00	\$130.00		\$702.00
Office 2021 version is used. Online textbook included in section fees.										
<b>BA-169Z DATA ANALYSIS USING MICROSOFT EXCEL, 4 CREDITS</b>										
Foundational course in project management. Students gain an introduction to project management principles and techniques, including identifying project life cycle phases, generating a project charter, learning and applying stakeholder management techniques, generating work/task breakdowns, network diagrams and identifying the critical path. Students will also learn and apply risk management techniques, resource allocation, and project monitoring and controlling methodologies.										
<b>Recommended:</b> Working knowledge and access to MS Excel and MS Word										
<b>Prerequisites:</b> BA-131 or CS-120 or higher or placement into BA-169Z										
ONL	<b>BA-169Z-30</b> <b>343754</b> D. CARINO					\$520.00	\$52.00	\$20.00		\$592.00
ONL	<b>BA-169Z-31</b> <b>348000</b> D. CARINO					\$520.00	\$52.00	\$20.00		\$592.00
<b>BA-177 PAYROLL ACCOUNTING, 3 CREDITS</b>										
This course introduces the student to the basic payroll procedures and transactions that are necessary for recording business transactions that compensate personnel. Included in this introduction are wage, salary, and commission or bonus computation and recording, as well as coverage of the federal laws that affect payroll, taxation, and payroll deductions.										
<b>Prerequisites:</b> BA-111 or BA-211Z										
<b>Recommended Prerequisites:</b> BA-131 or some knowledge of Excel										
ONL	<b>BA-177-01</b> <b>344178</b> I. SETO					\$390.00	\$39.00	\$107.50		\$536.50
Online textbook included in section fees.										
<b>BA-205 BUSINESS COMMUNICATIONS WITH TECHNOLOGY, 4 CREDITS</b>										
Students practice critical skills for successful communication in a business environment by employing a structured writing process, analyzing audience needs, and identifying and using appropriate communication channels and modalities. Students also work individually to produce a PowerPoint presentation with embedded narration and as team members to manage a comprehensive project and complete a business research paper.										
<b>Recommended Prerequisites:</b> BA-131 and WR-121Z										
ONL NCT	<b>BA-205-01</b> <b>344180</b> C. CHATTERTON					\$520.00	\$52.00	\$5.00		\$577.00
<b>BA-206 MANAGEMENT FUNDAMENTALS, 4 CREDITS</b>										
Concepts and theories of management with focus on planning, organizing, leading, and controlling. Decision making, planning principles, global management, managing people and teams, effective communication, and motivation are included.										
<b>Prerequisites:</b> WRD-090 or placement in WRD-098										
<b>Recommended Prerequisites:</b> BA-101Z and BA-251										
ONL NCT	<b>BA-206-01</b> <b>344182</b> J. AMAN					\$520.00	\$52.00	\$5.00		\$577.00
<b>BA-207 PREPPING FOR BUSINESS SUCCESS, 4 CREDITS</b>										
This course introduces the Career & Technical Education (CTE) student to the business practices necessary in conducting business within the scope of a specific CTE program. Students evaluate the business skills, traits, and commitment necessary to plan and operate a successful business venture. Students also learn how to evaluate small business opportunities, develop necessary business skills, and understand the resources necessary to start and manage a successful business.										
<b>Recommended Prerequisites:</b> At least one course in a CTE program										
OC HYB NCT	<b>BA-207-01</b> <b>344186 W</b> <b>2-3:50 PM</b> C. CHATTERTON					\$520.00	\$52.00	\$5.00		\$577.00
Class meets on April 1, 22, and May 13; additional work assigned and completed in Moodle.										

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Course No      Course Title, Credits								Course No      Course Title, Credits							
	Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total		Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total
<b>BA-211Z    PRINCIPLES OF FINANCIAL ACCOUNTING, 4 CREDITS</b> Imparts an understanding of the purpose of accounting, common financial statement items, and the principles of internal controls. Focuses on recording the impact of economic events on account balances using U.S. Generally Accepted Accounting Principles, and the creation and analysis of financial statements to aid in external decision making. <b>Prerequisites:</b> BA-101Z, and BA-131 or BA-169Z <b>Recommended Prerequisites:</b> BA-111, and MTH-050 or higher								<b>BA-226Z    INTRODUCTION TO BUSINESS LAW, 4 CREDITS</b> Provides a comprehensive overview of U.S. business law, including the legal system, contracts, torts, intellectual property, agency, employment, and business organization forms. Emphasizes practical legal knowledge and explores how laws impact business operations, with a focus on risk management, contract disputes, business formation, and compliance with government regulation. Introduces legal challenges in business through real cases and legal terminology.							
OC HYB	<b>BA-211Z-01</b>	<b>344188 W</b>				<b>10-11:50 AM</b>		ONL	<b>BA-226Z-01</b>	<b>344215</b>					
	T. FRANK	\$520.00	\$52.00	\$134.99	\$706.99				M. MOISO	\$520.00	\$52.00	\$69.13	\$641.13		
	Online textbook included in section fees.								Online textbook included in section fees.						
ONL	<b>BA-211Z-02</b>	<b>344195</b>						<b>BA-228    COMPUTERIZED ACCOUNTING, 4 CREDITS</b> An introductory, hands-on experience with Quickbooks Online, a cloud-based software application used as the bookkeeping system for small to mid-sized service businesses and merchandisers. Includes business setup and transactions for customer, vendor, and banking modules, transactions for a full accounting cycle, inventory management, financial reporting, and troubleshooting. <b>Prerequisites:</b> BA-111 or BA-211Z <b>Recommended Prerequisites:</b> BA-131 or CS-120							
	J. SAN-CLAIRE	\$520.00	\$52.00	\$134.99	\$706.99			REM	<b>BA-228-01</b>	<b>344218 M</b>				<b>9-10:30 AM</b>	
	Online textbook included in section fees.								L. LEWIS	\$520.00	\$52.00	\$113.75	\$685.75		
	Online textbook included in section fees.								Online textbook included in section fees.						
<b>BA-213Z    PRINCIPLES OF MANAGERIAL ACCOUNTING, 4 CREDITS</b> Builds an understanding of the role of managerial accounting in a business, focusing on the development and use of information to evaluate production costs and operational performance in support of short- and long-term organizational decision-making. <b>Prerequisites:</b> BA-211Z with a C or better								<b>BA-229    EMPLOYMENT LAW, 4 CREDITS</b> Comprehensive treatment of federal and state employment law and its impact on the Human Resource Manager and Human Resource Management practices.							
OC HYB	<b>BA-213Z-01</b>	<b>344196 T</b>				<b>1-3:50 PM</b>		ONL	<b>BA-229-01</b>	<b>344219</b>					
	I. SETO	\$520.00	\$52.00	\$134.99	\$706.99				M. MOISO	\$520.00	\$52.00	\$69.13	\$641.13		
	Online textbook included in section fees.								Online textbook included in section fees.						
ONL	<b>BA-213Z-02</b>	<b>344202</b>						<b>BA-238    SALES, 4 CREDITS</b> Professional consultative selling techniques and how professional selling fits into a comprehensive marketing program as well as daily life. Interactive exercises will be used throughout the course that emphasize face-to-face communication skills and relationship building. <b>Recommended Prerequisites:</b> WRD-090 or placement in WRD-098							
	J. SAN-CLAIRE	\$520.00	\$52.00	\$134.99	\$706.99			REM	<b>BA-238-01</b>	<b>344220 TTH</b>				<b>10-11:50 AM</b>	
	Online textbook included in section fees.								J. EICHENBERGER	\$520.00	\$52.00	\$5.00	\$577.00		
<b>BA-218    PERSONAL FINANCE, 4 CREDITS</b> Analysis and application of basic principles of personal finance including budgeting and spending, financial decision-making, use of credit, saving and investing, home purchase, taxes, risk management, retirement planning, estate planning, and other major personal finance topics. <b>Prerequisites:</b> MTH-050 or higher and WRD-098								<b>BA-240    INTRODUCTION TO FINANCIAL MANAGEMENT, 4 CREDITS</b> In this course, you will build upon knowledge obtained from BA-211Z to comprehend the process and practice of corporate financial management. Purchasing capital assets and undertaking projects require sound decision-making and management of risk, as well as a solid understanding of the time value of money. In this course, you will delve into discounted cash flow analysis for stocks and bonds, capital budgeting, the cost of capital, and effective corporate financial planning. Both theoretical and practical, our focus is on decisions that are made by the corporate financial manager. <b>Prerequisites:</b> BA-211Z							
OC HYB	<b>BA-218-01</b>	<b>344209 W</b>				<b>10-11:50 AM</b>		ONL	<b>BA-240-01</b>	<b>344221</b>					
	J. AMAN	\$520.00	\$52.00	\$134.99	\$706.99				J. AMAN	\$520.00	\$52.00	\$134.99	\$706.99		
	Online textbook included in section fees.								Online textbook included in section fees.						
<b>BA-223    PRINCIPLES OF MARKETING, 4 CREDITS</b> Offers a comprehensive investigation of strategic marketing in a global environment. Topics covered will include research, ethics, consumer behavior, product strategy, distribution strategy, promotional strategy and pricing strategy. <b>Recommended Prerequisites:</b> WRD-090 or placement in WRD-098								<b>BA-250    SMALL BUSINESS MANAGEMENT, 4 CREDITS</b>							
ONL	<b>BA-223-01</b>	<b>344210</b>													
	K. HEINIG	\$520.00	\$52.00	\$48.75	\$620.75										
	Online textbook included in section fees.														
<b>BA-224    HUMAN RESOURCE MANAGEMENT, 4 CREDITS</b> Focuses on a practical, real world approach to Human Resource Management for line managers and Human Resource Managers. Introduces history and current legal environment of Human Resource Management and applies current practice in the functions of staffing, human resource development, compensation, safety and health, and employee and labor relations in both union and non-union environment.															
ONL	<b>BA-224-01</b>	<b>344212</b>													
	M. MOISO	\$520.00	\$52.00	\$54.99	\$626.99										
	Online textbook included in section fees.														

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Course No Course Title, Credits							Course No Course Title, Credits						
	Section No Instructor	Crs Reg.	Days (M,T,W,TH,F,S,SU) Tuition	Fee	Time Crs. Fee	Total		Section No Instructor	Crs Reg.	Days (M,T,W,TH,F,S,SU) Tuition	Fee	Time Crs. Fee	Total
<p>Focuses on entrepreneurship and small business management from business concept development to new business launch and key steps in between. Students integrate knowledge and skills from prior business coursework to create a substantive business plan or other projects that reinforce essential entrepreneurship and small business management concepts that are associated with this course. Students should take this course in the final year of their academic program(s).</p> <p><b>Prerequisites:</b> BA-119, BA-206, BA-211Z, BA-223, BA-224, and WR-121Z. Student Petition required for non-Business AAS students</p>							<p>Students demonstrate the ability to manage a real-world project from initiation through closing. Course deliverables include project scope statement, communication management plan, risk management plan, status report with Gantt chart, and 'Lessons Learned' report and presentation. The project as well as a comprehensive exam will demonstrate knowledge acquired in prerequisite classes required for the Project Management AAS. Required: Student Petition.</p> <p><b>Prerequisites:</b> BA-120, BA-125, and BA-127</p>						
ONL	<b>BA-250-01</b> J. AMAN	<b>344223</b>		\$520.00	\$52.00	\$123.20	REM LCT	<b>BA-268-01</b> S. RAHN	<b>344229 T</b>		\$390.00	\$39.00	\$5.00
Online textbook included in section fees.							6-8:20 PM Required: Student Petition. Class meets remotely (as project teams) on zoom, Tuesdays 6:00-8:20pm. PLEASE NOTE: Once teams have been assigned, the instructor will create a schedule to meet with each team for 30 minutes during the 6:00-8:20pm course time on Tuesdays. Online coursework will also be assigned and completed online via Moodle.						
<b>BA-254 BASIC COMPENSATION &amp; BENEFITS, 4 CREDITS</b> Covers wages, salary benefits, and plans with a primary focus on designing an effective and strategic comprehension and benefit program within an organization. Covers general compensation topics, terminology, and practical applications to the workplace.							<b>BA-270 SOCIAL MEDIA MARKETING, 4 CREDITS</b> This is an introductory course that provides an overview of social media and its role in marketing. Nearly everything consumers do is tracked online and this level of marketing analytics is assisting organizations develop a better understanding of consumer and market needs and trends. This course will seek to develop an understanding of how social media compliments marketing.						
ONL	<b>BA-254-01</b> M. MOISO	<b>344224</b>		\$520.00	\$52.00	\$54.99	<b>Recommended Prerequisites:</b> WRD-090 or placement in WRD-098						
Online textbook included in section fees.							ONL NCT	<b>BA-270-01</b> C. CHATTERTON	<b>344230</b>		\$520.00	\$52.00	\$5.00
							\$577.00						
<b>BA-255 GOVERNMENTAL AND NONPROFIT ACCOUNTING, 4 CREDITS</b> Build upon knowledge obtained from financial accounting coursework to comprehend and gain practice in the specialized area of accounting for governmental and nonprofit entities. Topics include fund types, budgetary and expenditure controls, and modified accrual accounting.							<b>BA-280 BUSINESS/CWE, 2-6 CREDITS</b> Cooperative work experience. On-the-job experience in a business related to the student's major course of study. Under supervision of instructor and employer. May be repeated for up to 6 credits. Required: Student Petition.						
<b>Prerequisites:</b> BA-211Z							<b>Corequisites:</b> CWE-281						
<b>Recommended Prerequisites:</b> BA-112 and BA-213Z							ONL NCT	<b>BA-280-01</b> B. FORNEY	<b>344231</b>		\$780.00	\$78.00	\$45.00
ONL	<b>BA-255-01</b> J. SAN-CLAIRE	<b>344226</b>		\$520.00	\$52.00	\$135.00	Required: Student Petition. Corequisite: Take the following CWE-281-06.						
Online textbook included in section fees.							ONL NCT	<b>BA-280-02</b> S. RAHN	<b>344235</b>		\$780.00	\$78.00	\$45.00
							Required: Student Petition. Corequisite: Take the following CWE-281-06.						
<b>BA-261 CONSUMER BEHAVIOR, 4 CREDITS</b> Seeks to understand how and why people make consumption decisions then apply this understanding to marketing strategies. Concepts of the consumer decision-making process, personal and interpersonal factors and their impact on consumer decisions are major components.							<b>BA-285 HUMAN RELATIONS IN BUSINESS, 4 CREDITS</b> Introduces the theory and practical application of human relations at the individual, group, and organizational levels. Emphasizes psychological principles that help build relationships among employees and employers. Includes goal setting, motivation, communication, leadership, conflict management, and individual and group behavior.						
<b>Recommended Prerequisites:</b> WRD-090 or placement in WRD-098							ONL	<b>BA-285-01</b> M. MOISO	<b>344236</b>		\$520.00	\$52.00	\$48.75
ONL	<b>BA-261-01</b> J. EICHENBERGER	<b>344227</b>		\$520.00	\$52.00	\$5.00	Online textbook included in section fees.						
							ONL	<b>BA-285-02</b> T. DANIEL	<b>344238</b>		\$520.00	\$52.00	\$48.75
							Online textbook included in section fees.						
<b>BA-264 PROJECT MANAGEMENT TOOLS, 3 CREDITS</b> This course introduces students to three tools used in managing projects: Microsoft Teams, Microsoft Planner, and Microsoft Project. Students examine the criteria for selecting the right project management tool for task management, work management, and project management. Students learn how to use these tools for communicating and collaborating with project team members and stakeholders; planning a project, adding project tasks, assigning resources and costs; building a project schedule, moving tasks to different phases, tracking project progress, and properly closing out a project. Students will also gain an understanding of how to share project information across applications using dashboards and reports. In addition, students will briefly explore cloud-based options as alternative project management tools.							<b>Business Technology</b>						
<b>Prerequisites:</b> BA-120							BT-120	<b>PERSONAL KEYBOARDING, 2 CREDITS</b>					
ONL LCT	<b>BA-264-01</b> S. RAHN	<b>344228</b>		\$390.00	\$39.00	\$0.00							

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**Other Coding Translations:**  
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**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
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Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
Basic instruction on electronic alphanumeric keyboard. Provides practice for speed and accuracy within an individual program. Students will also develop the necessary skills to effectively use the Internet, use email, and create simple documents within a Google email profile and/or Microsoft Word.										
ONL	<b>BT-120-01</b> 344240	S. SIMMONS				\$260.00	\$26.00	\$10.00		\$296.00
ONL	<b>BT-120-02</b> 344242	S. SIMMONS				\$260.00	\$26.00	\$10.00		\$296.00
<b>BT-121 DATA ENTRY, 1 CREDIT</b>										
This course is designed to teach the computer numeric keypad by touch with speed and accuracy using industry standards for data entry. This skill is especially helpful to people in the fields of data entry, accounting, office administration, insurance, banking and finance, and any other work that requires numeric input.										
ONL	<b>BT-121-01</b> 344243	S. SIMMONS				\$130.00	\$13.00	\$10.00		\$153.00
ONL	<b>BT-121-02</b> 344247	S. SIMMONS				\$130.00	\$13.00	\$10.00		\$153.00
<b>BT-122 KEYBOARDING SKILLBUILDING, 2 CREDITS</b>										
Designed to improve keyboarding proficiency using the standard keyboarding by touch method established within BT-120. Speed and accuracy on the keyboard will be further refined. Proper formatting of various types of business communication will be reviewed and established(emails, memos, block-style business letters). Students will utilize Microsoft Word and/or Google documents to create letters and memos.										
<b>Prerequisites:</b> BT-120										
ONL	<b>BT-122-01</b> 344248	S. SIMMONS				\$260.00	\$26.00	\$10.00		\$296.00
ONL	<b>BT-122-02</b> 344250	S. SIMMONS				\$260.00	\$26.00	\$10.00		\$296.00
<b>BT-124 BUSINESS EDITING I, 3 CREDITS</b>										
Course builds business communication skills through the study of the written communication process and the correct use of grammar, spelling, vocabulary, types of written business communication, and basic editing principles.										
<b>Recommended Prerequisites:</b> WRD-090 or placement in WRD-098										
ONL NCT	<b>BT-124-01</b> 344252	S. SIMMONS				\$390.00	\$39.00	\$10.00		\$439.00
<b>BT-125 BUSINESS EDITING II, 3 CREDITS</b>										
This course continues the study of professional editing and writing in a business office. The continued and correct use of acceptable spelling, grammar, and formatting of business documents will be covered in-depth, with increased practice in writing and editing skills in the composition of letters, memos, emails, reports, and presentations. Functional business reports will be covered in relation to written reports and proposals, as well as customer service phone etiquette and the creation of professional presentations for the workplace.										
<b>Prerequisites:</b> BT-124 with a C or better										
ONL NCT	<b>BT-125-01</b> 344254	S. SIMMONS				\$390.00	\$39.00	\$10.00		\$439.00
<b>BT-150 MS WORD FOR BUSINESS &amp; THE WORKPLACE, 4 CREDITS</b>										
This course provides a comprehensive introduction to Microsoft Word, progressing from beginning to intermediate skills essential for business and workplace applications. Students will learn to create, format, and edit professional documents. Emphasis will be placed on efficiency, accuracy, and professional presentation, preparing students to use Word effectively in an organizational setting. Hands-on exercises, real-world business scenarios, and projects will reinforce learning.										
ONL	<b>BT-150-01</b> 348001	F. MEYERS				\$520.00	\$52.00	\$90.00		\$662.00
Office 2019 version is used. Online textbook included in section fees.										
<b>BT-174 MICROSOFT DIGITAL TOOLS FOR THE PROFESSIONAL, 2 CREDITS</b>										
Introductory course utilizing Microsoft Office 365 digital communication and collaboration tools. The material taught in this course teaches the necessary skills required in business environments that use Outlook integrated with additional Office 365 complementary digital communication and collaboration tools.										
ONL	<b>BT-174-01</b> 344260	M. SORRENTINO				\$260.00	\$26.00	\$66.25		\$352.25
Online textbook included in section fees.										
<b>BT-271 ADVANCED BUSINESS PROJECTS, 4 CREDITS</b>										
This is a capstone course for the Administrative Professional AAS. Students will utilize processes, tools, and techniques as used by an administrative professional managing a project or event. Students will practice oral and written communication as used in an office or business setting. In addition students will analyze information, problem solve, make decisions, establish priorities, and use time management skills in this capstone course that combines the knowledge and skills acquired in foundation administrative professional courses such as word processing, creating spreadsheets, creating databases, creating presentations; as well as document formatting, proofreading, and editing.										
<b>Prerequisites:</b> BA-131, BA-169Z, BT-120, BT-125, BT-150, and BT-262										
ONL NCT	<b>BT-271-01</b> 344262	B. FORNEY				\$520.00	\$52.00	\$35.00		\$607.00
Required: Student Petition.										

## Chemistry

### CH-104 INTRODUCTORY CHEMISTRY, 5 CREDITS

A lab transfer course for students in nursing, allied health fields and liberal arts. Topics include: observation, measurement, composition, stoichiometry, atomic structure, periodic table, bonding and nomenclature.

**Corequisites:** CH-104L and CH-104S

**Prerequisites:** MTH-065 or MTH-098 or placement in MTH-095; and WRD-090 or placement in WRD-098

ONL	<b>CH-104-40</b> 344257	TBA				\$650.00	\$65.00	\$50.00		\$765.00
This section requires an in-person lab and seminar.										

### CH-104L INTRODUCTORY CHEMISTRY LAB, 0 CREDIT

Lab course for CH-104

**Corequisites:** CH-104 and CH-104S

#### Campus Locations:

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#### Other Coding Translations:

**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

#### ESPAÑOL: Enseñado en español

**LCT:** Low-Cost Text  
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Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
OC LCT	<b>CH-104L-40 344259 TBA</b> TBA This is an open format lab and students are required to complete 3 hrs of lab work per week in DJ242 on the OR City campus. Open lab hours are Wednesdays & Fridays: 9 AM- 3PM, and Thursdays: 9 AM- 8PM. For more information contact George Burgess george.burgess@clackamas.edu.					\$0.00	\$0.00	\$0.00		\$0.00
<b>CH-104S INTRODUCTORY CHEMISTRY SEMINAR, 0 CREDIT</b> Seminar course for CH-104 <b>Corequisites:</b> CH-104 and CH-104L										
oc	<b>CH-104S-40 344261 TH</b> TBA					\$0.00	\$0.00	\$0.00	11-11:50 AM	\$0.00
<b>CH-105 INTRODUCTORY CHEMISTRY, 5 CREDITS</b> A lab course discussing heat; molecular and ionic interactions in solids, liquids, gases, and solutions; chemical reactions including acid-base, electron transfer, and equilibrium. <b>Prerequisites:</b> CH-104 <b>Corequisites:</b> CH-105L and CH-105S										
ONL	<b>CH-105-40 344263</b> TBA This section requires an in-person lab and seminar. For more information contact George Burgess george.burgess@clackamas.edu.					\$650.00	\$65.00	\$50.00		\$765.00
<b>CH-105L INTRODUCTORY CHEMISTRY LAB, 0 CREDIT</b> Lab course for CH-105 <b>Corequisites:</b> CH-105 and CH-105S										
OC LCT	<b>CH-105L-40 344265 TBA</b> TBA This is an open format lab and students are required to complete 3 hrs of lab work per week in DJ242 on the OR City campus. Open lab hours are Wednesdays & Fridays: 9 AM- 3PM, and Thursdays: 9 AM- 8PM. For more information contact George Burgess george.burgess@clackamas.edu.					\$0.00	\$0.00	\$0.00		\$0.00
<b>CH-105S INTRODUCTORY CHEMISTRY SEMINAR, 0 CREDIT</b> Seminar course for CH-105 <b>Corequisites:</b> CH-105 and CH-105L										
OC LCT	<b>CH-105S-40 344267 TH</b> TBA					\$0.00	\$0.00	\$0.00	3-3:50 PM	\$0.00
<b>CH-112 CHEMISTRY FOR HEALTH SCIENCES, 4 CREDITS</b> One-term preparatory chemistry course for students who want to take BI-231 and/or BI-234. Includes measurement; atomic structure; periodic table; bonding; nomenclature; heat; molecular and ionic interactions in solids; liquids and solutions; chemical reactions including acid-base; organic chemistry; and biochemistry. <b>Corequisites:</b> CH-112L <b>Prerequisites:</b> MTH-065 or MTH-098 with a C or better or placement in MTH-095 <b>Prerequisites:</b> WRD-090 or placement in WRD-098 <b>Recommended Corequisite:</b> BI-112										
oc	<b>CH-112-01 344275 MW</b> TBA					\$520.00	\$52.00	\$50.00	10-11:20 AM	\$622.00
Corequisite: Take the following CH-112L-01.										
HAR	<b>CH-112-15 344277 TTH</b> N. DAS This section has an in-person lab requirement. Corequisite: Take the following CH-112L-15.					\$520.00	\$52.00	\$50.00	1-2:20 PM	\$622.00
OC HYB	<b>CH-112-20 344279 TBA</b> TBA In-Person exams required for this class. Exam Dates: TBD Corequisite: Take the following CH-112L-20.					\$520.00	\$52.00	\$50.00		\$622.00
OC HYB	<b>CH-112-40 344281 TBA</b> TBA Two in-Person exams required for this class. Exam Dates: TBD Corequisite: Take the following CH-112L-40.					\$520.00	\$52.00	\$50.00		\$622.00
<b>CH-112L CHEMISTRY FOR HEALTH SCIENCES LAB, 0 CREDIT</b> Lab course for CH-112 <b>Corequisites:</b> CH-112										
OC	<b>CH-112L-01 344283 W</b> TBA Corequisite: Take the following CH-112-01.					\$0.00	\$0.00	\$0.00	2-4:50 PM	\$0.00
HAR	<b>CH-112L-15 344287 TTH</b> N. DAS Corequisite: Take the following CH-112-15.					\$0.00	\$0.00	\$0.00	2:30 -3:50 PM	\$0.00
OC	<b>CH-112L-20 344289 TH</b> TBA Corequisite: Take the following CH-112-20.					\$0.00	\$0.00	\$0.00	6-8:50 PM	\$0.00
ONL	<b>CH-112L-40 344290</b> TBA Corequisite: Take the following CH-112-40.					\$0.00	\$0.00	\$0.00		\$0.00
<b>CH-150 PREPARATORY CHEMISTRY, 4 CREDITS</b> One term preparatory course for students who must take the general chemistry sequence (CH-221Z, CH-222Z, CH-223Z) but have no chemistry background. <b>Corequisites:</b> CH-150S <b>Prerequisites:</b> MTH-095 or placement in MTH-111Z										
ONL LCT	<b>CH-150-01 344292</b> TBA This section has an in-person seminar requirement.					\$520.00	\$52.00	\$20.00		\$592.00
<b>CH-150S PREPARATORY CHEMISTRY SEMINAR, 0 CREDIT</b> Seminar course for CH-150 <b>Corequisites:</b> CH-150										
oc	<b>CH-150S-01 344293 TH</b> TBA					\$0.00	\$0.00	\$0.00	9-9:50 AM	\$0.00
<b>CH-222SZ GENERAL CHEMISTRY II SEMINAR, 0 CREDIT</b> Seminar course for CH-222Z <b>Corequisites:</b> CH-222Z and CH-228Z										
oc	<b>CH-222SZ-01 344303 W</b> S. McDONALD Corequisite: Take the following CH-228Z-01, CH-222Z-01.					\$0.00	\$0.00	\$0.00	11:30 -12:20 PM	\$0.00
oc	<b>CH-222SZ-40 344305 W</b> D. MYERS Corequisite: Take the following CH-222Z-40, CH-228Z-40.					\$0.00	\$0.00	\$0.00	2-2:50 PM	\$0.00
<b>CH-222Z GENERAL CHEMISTRY II, 4 CREDITS</b>										

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Course No	Course Title, Credits					
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Explores and applies principles presented in CH-221Z to the study of the solid, liquid, and gaseous states of matter. Principles of stoichiometry, thermochemistry, kinetics, and foundational equilibrium are explored and applied to the study of aqueous and gas-phase chemical reactions. CH-222Z is a lecture course; CH-228Z is the laboratory component.

**Prerequisites:** CH-221Z with a C or better

**Corequisites:** CH-228Z and CH-222SZ

oc LCT	<b>CH-222Z-01</b>	<b>345114 MW</b>			<b>10-11:20 AM</b>	
	S. MCDONALD	\$520.00	\$52.00	\$0.00		\$572.00
	Corequisite: Take the following CH-222SZ-01, CH-228Z-01.					
ONL	<b>CH-222Z-40</b>	<b>345115</b>				
	D. MYERS	\$520.00	\$52.00	\$0.00		\$572.00
	This section requires an in-person seminar and lab.					
	Corequisite: Take the following CH-222SZ-40, CH-228Z-40.					

#### CH-223SZ GENERAL CHEMISTRY III SEMINAR, 0 CREDIT

Seminar course for CH-223Z

**Corequisites:** CH-223Z and CH-229Z

oc	<b>CH-223SZ-01</b>	<b>344314 W</b>			<b>11:30 -12:20 PM</b>	
	D. MYERS	\$0.00	\$0.00	\$0.00		\$0.00
	Corequisite: Take the following CH-223Z-01, CH-229Z-01.					
oc	<b>CH-223SZ-20</b>	<b>344316 TH</b>			<b>6-6:50 PM</b>	
	J. DU BOULAY	\$0.00	\$0.00	\$0.00		\$0.00
	Corequisite: Take the following CH-223Z-20, CH-229Z-20.					

#### CH-223Z GENERAL CHEMISTRY III, 4 CREDITS

Builds upon the principles presented in CH-222Z, explores thermodynamics and chemical equilibrium, and applies them to the study of aqueous acid-base reactions, solubility, and electrochemistry. CH-223Z is a lecture course; CH-229Z is the laboratory component.

**Prerequisites:** CH-222Z with a C or better

**Corequisites:** CH-229Z and CH-223SZ

oc	<b>CH-223Z-01</b>	<b>345118 MW</b>			<b>10-11:20 AM</b>	
	D. MYERS	\$520.00	\$52.00	\$0.00		\$572.00
	Corequisite: Take the following CH-223SZ-01, CH-229Z-01.					
ONL LCT	<b>CH-223Z-20</b>	<b>345119</b>				
	J. DU BOULAY	\$520.00	\$52.00	\$0.00		\$572.00
	This section has an in-person lab and seminar requirement.					
	Corequisite: Take the following CH-223SZ-20, CH-229Z-20.					

#### CH-228Z GENERAL CHEMISTRY II LABORATORY, 1 CREDIT

Experiments correspond to the topics covered in CH-222Z including the fundamentals of intermolecular interactions, stoichiometric relationships, chemical equilibria and their application to the synthesis, identification, and analysis of chemical compounds. CH-228Z is the laboratory component; CH-222Z is the lecture course.

**Prerequisites:** CH-221Z or CH-227Z with a C or better

**Corequisites:** CH-222Z and CH-222SZ

oc	<b>CH-228Z-01</b>	<b>345116 T</b>			<b>9-11:50 AM</b>	
	S. MCDONALD	\$130.00	\$13.00	\$50.00		\$193.00
	Corequisite: Take the following CH-222Z-01, CH-222SZ-01.					
oc	<b>CH-228Z-40</b>	<b>345117 T</b>			<b>1-3:50 PM</b>	
	D. MYERS	\$130.00	\$13.00	\$50.00		\$193.00
	Corequisite: Take the following CH-222Z-40, CH-222SZ-40.					

#### CH-229Z GENERAL CHEMISTRY III LABORATORY, 1 CREDIT

Experiments correspond to the topics covered in CH-223Z including the principles of chemical equilibria and their application to chemical analysis using volumetric and electrochemical methods. CH-229Z is the laboratory component; CH-223Z is the lecture course.

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**Prerequisites:** CH-222Z or CH-228Z with a C or better

**Corequisites:** CH-223Z and CH-223SZ

oc	<b>CH-229Z-01</b>	<b>345120 TH</b>			<b>9-11:50 AM</b>	
	D. MYERS	\$130.00	\$13.00	\$50.00		\$193.00
	Corequisite: Take the following CH-223Z-01, CH-223SZ-01.					
oc	<b>CH-229Z-20</b>	<b>345121 TH</b>			<b>7-9:50 PM</b>	
	J. DU BOULAY	\$130.00	\$13.00	\$50.00		\$193.00
	Corequisite: Take the following CH-223SZ-20, CH-223Z-20.					

#### CH-243 ORGANIC CHEMISTRY III, 5 CREDITS

Third term of a transfer sequence meeting organic chemistry requirement for premedical, dental, veterinary, pharmacy, chiropractic medicine, chemical engineering and biology majors.

**Prerequisites:** CH-242

**Corequisites:** CH-243L and CH-243S

oc	<b>CH-243-01</b>	<b>344318 MW</b>			<b>1-2:20 PM</b>	
	G. BURGESS	\$650.00	\$65.00	\$50.00		\$765.00

#### CH-243L ORGANIC CHEMISTRY III LAB, 0 CREDIT

Lab course for CH-243

**Corequisites:** CH-243 and CH-243S

oc	<b>CH-243L-01</b>	<b>344320 F</b>			<b>9-11:50 AM</b>	
	G. BURGESS	\$0.00	\$0.00	\$0.00		\$0.00

#### CH-243S ORGANIC CHEMISTRY III SEMINAR, 0 CREDIT

Seminar course for CH-243

**Corequisites:** CH-243 and CH-243L

oc	<b>CH-243S-01</b>	<b>344321 W</b>			<b>2:30 -3:20 PM</b>	
	G. BURGESS	\$0.00	\$0.00	\$0.00		\$0.00

## College and Career Guidance

#### HD-102 SERVICE LEARNING EXPERIENCE, 1-6 CREDITS

Provides students with a service learning experience in a community setting. Students complete 30-180 hours of volunteer work and participate in ongoing journaling as well as reflection exercises to connect volunteer work with an area of study. May be repeated for up to 6 credits. Required: Student Petition.

ONL NCT	<b>HD-102-01</b>	<b>344416</b>				
	J. GINSBURG	\$0.00	\$0.00	\$0.00		\$0.00V
	Required: Student Petition.					

#### HD-138 UNDERSTANDING AND MANAGING ANXIETY AND DEPRESSION, 3 CREDITS

Identifies components of anxiety and depression, contexts in which anxiety and depression occur, and solutions for coping with anxiety and depression symptoms through the use of various anxiety and depression management techniques.

OC HYB	<b>HD-138-01</b>	<b>344417 MW</b>			<b>1-2:20 PM</b>	
	J. CORTES	\$390.00	\$39.00	\$0.00		\$429.00
	Meets: 4/13-6/13.					

#### HD-140 CAREER EXPLORATION, 3 CREDITS

Students use information about themselves (values, interests, personality and skills) and information about the world of work (careers and industries) to explore and make long term career decisions.

ONL NCT	<b>HD-140-01</b>	<b>344421</b>				
	T. BOYLE- GALESTIANTZ	\$390.00	\$39.00	\$10.00		\$439.00

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#### Distance Education Notification:

**ONL:** Online Only  
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**HYB:** In-person plus online work

#### Other Coding Translations:

**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

#### ESPAÑOL: Enseñado en español

**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

Course No	Course Title, Credits					
Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time			
Instructor		Tuition	Fee	Crs. Fee	Total	

**HD-144 ASSERTIVENESS, 1 CREDIT**

Students can use this course to develop assertiveness in their communication and interpersonal relationships. The course focuses on identifying and meeting personal needs, setting boundaries, and asserting oneself in career, social, and personal settings.

ONL	<b>HD-144-01</b>	<b>344424</b>				
	M. MALLATT		\$130.00	\$13.00	\$10.00	\$153.00
	Meets: 5/4-6/13.					

**HD-161 MULTICULTURAL AWARENESS, 3 CREDITS**

Introduction to the skills and personal attributes college graduates need to live and work in a diverse world, and how these characteristics influence interpersonal relationships in everyday life. This course focuses on the identification and application of strategies to improve personal multicultural awareness.

ONL	<b>HD-161-01</b>	<b>344431</b>				
	L. MARTINEZ		\$390.00	\$39.00	\$10.00	\$439.00

**HD-202ES TRANSICIONES DE VIDA, 3 CREDITS**

Examina el proceso y las etapas de las transiciones de la vida. Ayuda a los adultos de reingreso a identificar fortalezas y barreras personales relacionadas con el éxito en la educación y el empleo. Ofrece oportunidades para practicar habilidades interpersonales. Proporciona información sobre el campus de CCC y los recursos comunitarios que pueden ayudar a los estudiantes a alcanzar sus metas. Se requiere petición del estudiante.

**Corequisites:** HD-208ES

HAR	<b>HD-202ES-01</b>	<b>345514 T</b>			<b>9-11:50 AM</b>	
ESPAÑOL	C. SANCHEZ		\$0.00	\$0.00	\$40.00	\$40.00

**HD-208ES PLANIFICACIÓN DE CARRERA Y VIDA, 3 CREDITS**

Ayuda a los adultos de reingreso a identificar intereses, habilidades, valores y destrezas transferibles y a aplicar esta información para establecer objetivos y tomar decisiones profesionales. Los estudiantes identifican y exploran opciones de capacitación, educación y empleo. Cubre habilidades de búsqueda de empleo, como entrevistas, redacción de currículums y desarrollo de una cartera profesional. Cada estudiante desarrolla un plan de acción que identifica objetivos y próximos pasos.

**Corequisites:** HD-202ES

HAR	<b>HD-208ES-01</b>	<b>345515 TH</b>			<b>9-11:50 AM</b>	
ESPAÑOL	C. SANCHEZ		\$0.00	\$0.00	\$40.00	\$40.00

**HD-209 JOB SEARCH SKILLS, 2-3 CREDITS**

Use a Job Search Plan to conduct labor market research, develop job search networking relationships, and to prepare and present applications, cover letters, resumes, interviews, and thank you notes.

OC HYB	<b>HD-209-01</b>	<b>344435 TH</b>			<b>10-11:50 AM</b>	
	C. SIMS		\$390.00	\$39.00	\$0.00	\$429.00V
	Required: Student Petition. This section is for students in the Electronic Engineering Technology (EET) program, the Manufacturing (MFG) program, and the Renewable Energy Technology (RET) program.					

**HD-222 LEADERSHIP: MANAGING CHANGE AND CONNECTING TO COMMUNITY, 2 CREDITS**

Course No	Course Title, Credits					
Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time			
Instructor		Tuition	Fee	Crs. Fee	Total	

Strengthens leadership skills with an emphasis on managing change and connecting to community. Continues exploration of aspects of emotional intelligence, such as consciousness of others, displaying empathy, and developing relationships. Includes planning, implementation and assessment of activities focused on the college community and beyond. Required for some members of CCC's Associated Student Government. Highly recommended for Peer Assistants, New Student Mentors, and work-study students in Student Services departments. Also recommended for club leaders.

OC	<b>HD-222-01</b>	<b>344437 M</b>			<b>3-4:50 PM</b>	
	M. BAKER		\$0.00	\$0.00	\$0.00	\$0.00
REM	<b>HD-222-02</b>	<b>344440 TH</b>			<b>8-9:50 AM</b>	
	J. GINSBURG		\$0.00	\$0.00	\$0.00	\$0.00
OC	<b>HD-222-03</b>	<b>344441 M</b>			<b>3-4:50 PM</b>	
	M. BAKER		\$260.00	\$26.00	\$0.00	\$286.00
REM	<b>HD-222-04</b>	<b>344442 TH</b>			<b>8-9:50 AM</b>	
	J. GINSBURG		\$260.00	\$26.00	\$0.00	\$286.00

## Communication Studies

**COMM-100ESZ INTRODUCCIÓN A LA COMUNICACIÓN, 4 CREDITS**

COMM-100ESZ es un curso de encuesta que ofrece una visión general de la disciplina de la comunicación que enfatiza el desarrollo de las mejores prácticas de comunicación en diferentes contextos.

OC NCT	<b>COMM-100ESZ-01</b>	<b>347981 TTH</b>			<b>6-7:50 PM</b>	
ESPAÑOL	J. CORTES		\$520.00	\$52.00	\$0.00	\$572.00

**COMM-100Z INTRODUCTION TO COMMUNICATION, 4 CREDITS**

COMM-100Z is a survey course offering an overview of the communication discipline that emphasizes the development of best communication practices in different contexts.

OC NCT	<b>COMM-100Z-01</b>	<b>343697 MW</b>			<b>3-4:50 PM</b>	
	L. HANN		\$520.00	\$52.00	\$0.00	\$572.00
OC NCT	<b>COMM-100Z-02</b>	<b>343699 TTH</b>			<b>10-11:50 AM</b>	
	L. HANN		\$520.00	\$52.00	\$0.00	\$572.00
OC NCT	<b>COMM-100Z-03</b>	<b>343700 TTH</b>			<b>1-2:50 PM</b>	
	L. HANN		\$520.00	\$52.00	\$0.00	\$572.00

**COMM-111ESZ HABLANDO EN PUBLICO, 4 CREDITS**

COMM-111ESZ enfatiza el desarrollo de habilidades de comunicación al examinar y demostrar cómo la autoconciencia, la audiencia, el contenido y la ocasión influyen en la creación y entrega de discursos y presentaciones.

**Prerequisites:** WR-124ES

REM NCT	<b>COMM-111ESZ-01</b>	<b>343702 TTH</b>			<b>5-6:50 PM</b>	
ESPAÑOL	A. MOSEY		\$520.00	\$52.00	\$20.00	\$592.00

**COMM-111Z PUBLIC SPEAKING, 4 CREDITS**

COMM-111Z emphasizes developing communication skills by examining and demonstrating how self-awareness, audience, content, and occasion influence the creation and delivery of speeches and presentations.

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## Course Listing

2026/SP

Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Total
Instructor							Crs. Fee	
<b>Prerequisites:</b> WRD-098 or placement in WR-121Z								
<b>Recommended Prerequisite or Corequisite:</b> FYE-101								
OC NCT	<b>COMM-111Z- 343703 MW</b>						<b>8-9:50 AM</b>	
	01							
	K. HUGHES				\$520.00	\$52.00	\$20.00	\$592.00
REM NCT	<b>COMM-111Z- 343706 MW</b>						<b>8-9:50 AM</b>	
	02							
	J. SMITH				\$520.00	\$52.00	\$20.00	\$592.00
OC NCT	<b>COMM-111Z- 343708 TTH</b>						<b>8-9:50 AM</b>	
	03							
	K. MCCONNELL				\$520.00	\$52.00	\$20.00	\$592.00
REM NCT	<b>COMM-111Z- 343709 TTH</b>						<b>8-9:50 AM</b>	
	04							
	K. HUGHES				\$520.00	\$52.00	\$20.00	\$592.00
OC NCT	<b>COMM-111Z- 343710 MW</b>						<b>10-11:50 AM</b>	
	05							
	K. HUGHES				\$520.00	\$52.00	\$20.00	\$592.00
OC NCT	<b>COMM-111Z- 343712 MW</b>						<b>10-11:50 AM</b>	
	06							
	A. SAMBOR				\$520.00	\$52.00	\$20.00	\$592.00
REM NCT	<b>COMM-111Z- 343715 MW</b>						<b>10-11:50 AM</b>	
	07							
	J. SMITH				\$520.00	\$52.00	\$20.00	\$592.00
OC NCT	<b>COMM-111Z- 343718 TTH</b>						<b>10-11:50 AM</b>	
	08							
	K. MCCONNELL				\$520.00	\$52.00	\$20.00	\$592.00
REM NCT	<b>COMM-111Z- 343721 TTH</b>						<b>10-11:50 AM</b>	
	09							
	K. HUGHES				\$520.00	\$52.00	\$20.00	\$592.00
OC NCT	<b>COMM-111Z- 343723 MW</b>						<b>1-2:50 PM</b>	
	10							
	A. SAMBOR				\$520.00	\$52.00	\$20.00	\$592.00
OC NCT	<b>COMM-111Z- 343725 TTH</b>						<b>1-2:50 PM</b>	
	11							
	A. SAMBOR				\$520.00	\$52.00	\$20.00	\$592.00
REM	<b>COMM-111Z- 348072 TTH</b>						<b>6-7:50 PM</b>	
	12							
	J. HULT				\$520.00	\$52.00	\$20.00	\$592.00
HAR NCT	<b>COMM-111Z- 343730 TTH</b>						<b>1-2:50 PM</b>	
	15							
	J. HULT				\$520.00	\$52.00	\$20.00	\$592.00
HAR NCT	<b>COMM-111Z- 343732 MW</b>						<b>6-7:50 PM</b>	
	16							
	K. DOSS				\$520.00	\$52.00	\$20.00	\$592.00

### COMM-140 INTRODUCTION TO INTERCULTURAL COMMUNICATION, 4 CREDITS

Intercultural Communication is a course dedicated to exploring the impact cultural differences have on the communication process. Students explore their own cultural behaviors and possible ways to deal with difficult situations when cultural differences cause a problem(s). Emphasis is given to the influence of culture on the interpretation of the communication act and to the communication skills that enhance cross-cultural communication.

**Required:** Non-native English speakers must have a Student Performance Level of 8 as measured by the BEST Plus. There is not a requirement for native speakers

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

ONL NCT	<b>COMM-140-01 347983</b>							
	K. HUGHES				\$520.00	\$52.00	\$0.00	\$572.00

### COMM-212 MASS MEDIA & SOCIETY, 4 CREDITS

This course takes students through a critical study of the production and consumption of mass media, including television, radio, books, film, news, advertising and the internet. Students also examine the economic and social organization of mass media, the growth of new media technologies, and the relationship between media and the public.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

OC NCT	<b>COMM-212-01 343735 MW</b>						<b>10-11:50 AM</b>	
	M. JONES				\$520.00	\$52.00	\$10.00	\$582.00

### COMM-218Z INTERPERSONAL COMMUNICATION, 4 CREDITS

COMM-218Z increases the knowledge and use of competent communication skills to better understand oneself, others, and the role of communication in interpersonal relationships.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

OC NCT	<b>COMM-218Z- 343737 MW</b>						<b>10-11:50 AM</b>	
	01							
	M. WILLIAMS				\$520.00	\$52.00	\$0.00	\$572.00
HAR NCT	<b>COMM-218Z- 343741 TTH</b>						<b>10-11:50 AM</b>	
	15							
	J. HULT				\$520.00	\$52.00	\$0.00	\$572.00

### COMM-219 SMALL GROUP DISCUSSION, 4 CREDITS

Theories and practices of small group communication through group discussions, readings and written exercises. Emphasis on effective group communication, leadership skills, and problem-solving in small groups.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

OC NCT	<b>COMM-219-01 345509 TTH</b>						<b>10-11:50 AM</b>	
	A. SAMBOR				\$520.00	\$52.00	\$0.00	\$572.00

## Computer Science

### CS-120 SURVEY OF COMPUTING, 4 CREDITS

A computer competency course to familiarize students with computer concepts, software applications and the implications of living in the digital age. Introduces students to computer concepts, including, but not limited to the Microsoft Windows environment, Microsoft Office Applications, hardware terminology, social media and the Internet.

**Prerequisites:** WRD-098 or placement in WR-121Z

ONL	<b>CS-120-30 343743</b>							
	M. SORRENTINO				\$520.00	\$52.00	\$179.99	\$751.99
Online textbook included in section fees.								

### CS-125H HTML & WEB SITE DESIGN, 4 CREDITS

Hands-on approach to planning, design, and developing published web sites using HTML tags in a text editor. The class focuses on basic HTML coding using HTML 5 models. Hyperlinks, images, cascading style sheets, forms, accessibility and design principles will be covered, as well as tools such as FTP clients, accessibility checkers, and validators.

**Prerequisites:** BA-131 or CS-120 or higher or placement into CS-125H

ONL	<b>CS-125H-30 343748</b>							
	M. SORRENTINO				\$520.00	\$52.00	\$20.00	\$592.00

### CS-140 INTRODUCTION TO OPERATING SYSTEMS, 4 CREDITS

Introduction to the theory and practical foundations of the Windows, Linux/UNIX, and macOS desktop operating systems. Discussion of and practice with OS administration through installation, configuration, networking, security, and virtualization.

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Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

**Prerequisites:** CS-120 or equivalent placement

**Prerequisites:** MTH-050 or MTH-060 or placement in MTH-065 or higher

**Prerequisites:** WRD-098 or placement in WR-121Z

OC NCT	<b>CS-140-01</b>	<b>343757 MW</b>			<b>1-2:50 PM</b>	
	D. EDGING		\$520.00	\$52.00	\$20.00	\$592.00

### CS-152 NETWORKING 2, 4 CREDITS

This course focuses on switching technologies and router operations that support small-to-medium business networks. It includes wireless local area networks (WLANs) and security concepts. This course, along with CS-151 and CS-153, covers the topics of the Cisco CCNA certification exam.

**Prerequisites:** CS-151

OC HYB NCT	<b>CS-152-01</b>	<b>343759 T</b>			<b>1-2:50 PM</b>	
		<b>TH</b>			<b>1-2:50 PM</b>	
	R. CARINO		\$520.00	\$52.00	\$20.00	\$592.00
	Class meets Tuesdays remote via Zoom from 1:00-2:50pm.					
	Class meets in-person on campus Thursdays from 1:00-2:50pm.					

### CS-160 COMPUTER SCIENCE ORIENTATION, 4 CREDITS

Examines foundational computing subjects used in Computer Science and Information Technology. Topics include computer architecture, electronic logic, data representation, networking, algorithms and programming, which are used in successive Computer Science courses. Information about degrees in Computer Science and Information Technology is also covered.

**Recommended Prerequisites:** MTH-060 or placement in MTH-065

OC NCT	<b>CS-160-01</b>	<b>343761 TTH</b>			<b>1-2:50 PM</b>	
	R. ALBERS		\$520.00	\$52.00	\$20.00	\$592.00
ONL NCT	<b>CS-160-02</b>	<b>343763</b>				
	R. ALBERS		\$520.00	\$52.00	\$20.00	\$592.00

### CS-162 COMPUTER SCIENCE II, 4 CREDITS

Introduces fundamental concepts of object oriented programming and dynamic memory management. Covers objects, classes, pointers, dynamic memory allocation, linked lists, and program correctness, verification, and testing.

**Prerequisites:** CS-161

OC	<b>CS-162-01</b>	<b>343765 TTH</b>			<b>10-11:50 AM</b>	
	R. ALBERS		\$520.00	\$52.00	\$20.00	\$592.00
ONL	<b>CS-162-02</b>	<b>343767</b>				
	R. ALBERS		\$520.00	\$52.00	\$20.00	\$592.00

### CS-170 PYTHON PROGRAMMING, 4 CREDITS

This is an extensive look at the Python programming language. It covers variables, I/O, selection and repetition structures, functions, objects, classes, and exception handling.

**Prerequisites:** CS-162 or Student Petition

ONL	<b>CS-170-30</b>	<b>347997</b>				
	R. ALBERS		\$520.00	\$52.00	\$0.00	\$572.00

### CS-225 COMPUTER END USER SUPPORT, 3 CREDITS

Addresses professional and interpersonal skills needed by technicians who support and manage hardware and software information systems. Customer service skills; troubleshooting; helpdesk operation; product needs analysis, evaluation, purchase, and installation; technical documentation and training.

**Prerequisites:** CS-120 or placement in CS-121 or equivalent experience

**Prerequisites:** WRD-098 or placement in WR-101 or WR-121Z

Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

ONL	<b>CS-225-30</b>	<b>343769</b>				
	D. EDGING		\$390.00	\$39.00	\$20.00	\$449.00

### CS-233J FRONT-END JAVASCRIPT II, 4 CREDITS

In-depth exploration of creating dynamic front-end website designs using modern JavaScript libraries and frameworks, including jQuery. Topics covered include shortcut DOM techniques, updated looping techniques, creating animation effects, and building AJAX applications using data from provided code as well as web APIs (Google, YouTube, Imgur).

**Prerequisites:** CS-133J

OC HYB	<b>CS-233J-01</b>	<b>343772 W</b>			<b>10-11:50 AM</b>	
		<b>M</b>			<b>10-11:50 AM</b>	
	D. CARINO		\$520.00	\$52.00	\$20.00	\$592.00
	Class meets Mondays remote via Zoom from 10:00-11:50am. Class meets in-person on campus Wednesdays from 10:00-11:50am.					

### CS-234P PHP/MYSQL WEB DEVELOPMENT, 4 CREDITS

Use PHP and MySQL to develop dynamic web sites for use on the Internet. Develop web sites ranging from simple online information forms to complex online applications. Introduce programming fundamentals including variables, control structures, functions and objects. Applications developed use MySQL as the backend database and will explore database connectivity, querying, and security.

**Prerequisites:** CS-125H

**Recommended Prerequisites:** CS-275

OC HYB	<b>CS-234P-01</b>	<b>343774 W</b>			<b>1-2:20 PM</b>	
		<b>M</b>			<b>1-2:20 PM</b>	
	D. CARINO		\$520.00	\$52.00	\$20.00	\$592.00
	Class meets Mondays remote via Zoom from 1:00-2:20pm. Class meets in-person on campus Wednesdays from 1:00-2:20pm.					

### CS-240L LINUX ADMINISTRATION 1, 4 CREDITS

Covers the fundamentals of the Linux operating system. Topics include: system architecture, installation, command line and file system. This course covers the topics of the Linux LPIC-1 Exam 101 certification.

**Prerequisites:** CS-140

ONL	<b>CS-240L-30</b>	<b>343775</b>				
	R. CARINO		\$520.00	\$52.00	\$20.00	\$592.00

### CS-251 DISCRETE STRUCTURES II, 4 CREDITS

Continuation of the introduction to discrete structures and techniques for computing started in CS-250/MTH-231. The course, which is the second in the two-term sequence, aims to convey the skills in discrete mathematics that are used in the study and practice of computer science. Topics include: Logic: propositional calculus, first-order predicate calculus; Formal reasoning: natural deduction, resolution; Applications to program correctness and automatic reasoning; Introduction to algebraic structures in computing.

**Prerequisites:** CS-250 or MTH-231

ONL	<b>CS-251-01</b>	<b>343778</b>				
	J. MILLER		\$520.00	\$52.00	\$20.00	\$592.00

### CS-260 DATA STRUCTURES, 4 CREDITS

Covers common data structures used for the storage and manipulation of data, as well as data abstraction, sorting algorithms, and algorithm analysis. Data structures include linked lists, stacks, queues, binary trees, b-trees, hash tables, and graphs.

**Prerequisites:** CS-162

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ONL	<b>CS-260-01</b> 343779 J. MILLER		\$520.00 \$52.00	\$20.00	\$592.00	
ONL	<b>CS-260-02</b> 343781 J. MILLER		\$520.00 \$52.00	\$20.00	\$592.00	

**CS-279W WINDOWS SERVER ADMINISTRATION, 4 CREDITS**

Covers the fundamentals of installing, configuring, troubleshooting, and supporting the Microsoft Windows Server operating system and network infrastructure. Topics include: installation, Active Directory, data storage, resource access, security, monitoring, and disaster recovery. This course introduces the topics of the Microsoft Installation, Storage, and Compute with Windows Server certification exam.

**Prerequisites:** CS-151 and CS-240W

OC HYB	<b>CS-279W-01</b> 343782	<b>W</b>		<b>10-11:50 AM</b>		
		<b>M</b>		<b>10-11:50 AM</b>		
	R. CARINO		\$520.00 \$52.00	\$20.00	\$592.00	
Class meets Mondays remote via Zoom from 10:00-11:50am. Class meets in-person on campus Wednesdays from 10:00-11:50am.						

**CS-280 COMPUTER SCIENCE/CWE, 1-6 CREDITS**

Cooperative work experience. This course provides supervised work experience to supplement the academic classroom environment. Work examples include user support, work with computer applications or programming languages, installation or management PC computer systems, and developing websites. May be repeated for up to 9 credits. Required: Student Petition.

**Corequisites:** CWE-281

ONL NCT	<b>CS-280-01</b> 343784					
	J. MILLER		\$780.00 \$78.00	\$45.00	\$903.00V	
Required: Student Petition. Restricted to Computer Science students. Contact: jen.miller@clackamas.edu or 503-594-3138. Corequisite: Take the following CWE-281-05.						

**CS-297N NETWORKING CAPSTONE, 4 CREDITS**

The capstone course for the Computer & Network Administration AAS. Provides the opportunity to combine the discrete information learned from program classes together towards the completion of an enterprise-level computer project. Focus can also be placed on researching, practicing, and obtaining an industry-standard certification credential. Emphasis will be placed on project planning, timeline management, creation of training documentation, and oral presentation of completed works. Required: Student Petition.

OC HYB LCT	<b>CS-297N-01</b> 343787	<b>T</b>		<b>10-11:50 AM</b>		
		<b>TH</b>		<b>10-11:50 AM</b>		
	R. CARINO		\$520.00 \$52.00	\$20.00	\$592.00	

**CS-297W WEBSITE CAPSTONE, 3 CREDITS**

Provides the opportunity to function in a production design environment, work cooperatively with students from other focus areas, and research emerging website technologies. Emphasis will be placed on client interaction, project teams, and accountability, as well as the development of a professional portfolio web site or completion of a research project in an emerging web-related technology.

**Prerequisites:** CS-133J and CS-135I

OC HYB NCT	<b>CS-297W-01</b> 343792	<b>T</b>		<b>10-11:20 AM</b>		
		<b>TH</b>		<b>10-11:20 AM</b>		
	D. CARINO		\$390.00 \$39.00	\$20.00	\$449.00	
Class meets in-person on campus Tuesdays from 10:00-11:20am. Class meets Thursdays remote via Zoom from 10:00-11:20am.						

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**Distance Education Notification:**  
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**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

**Other Coding Translations:**  
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**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

**Computer-Aided Drafting Technology**

Call 503-594-3318 for more information, or contact Advising, 503-594-3475.

**CDT-225 ADVANCED SOLIDWORKS, 3 CREDITS**

Advanced features of SolidWorks will be discussed and problems will be worked that exemplify them. Subjects include equations, configurations, design tables and dynamics. Required: Student Petition.

**Prerequisites:** CDT-108A

REM	<b>CDT-225-01</b> 344253	<b>TTH</b>		<b>4:30 -7:20 PM</b>		
	M. ROTUNDO		\$390.00 \$39.00	\$153.75	\$582.75	
Required: Student Petition.						

**CDT-240 REVIT FOR ARCHITECTURE, 3 CREDITS**

Introduction to the basic principles in Revit for architecture and construction. Students create floorplans using walls, doors, and windows; add furniture fixtures, curtain walls, floors, ceiling grids, and generate elevations, sections, details, and schedules directly from the model.

ONL	<b>CDT-240-01</b> 344256					
	K. HOLLINGBERY		\$390.00 \$39.00	\$0.00	\$429.00	

**Cooperative Work Experience**

All students must register for the appropriate CWE course and a CWE Seminar as listed in the following section - Cooperative Work Experience Seminar. Instructor approval is required for all CWE courses. Note: day and time of CWE classes are arranged according to the student's work hours on the job. Students may earn a maximum of 6 CWE credits per term or a maximum of 12 CWE credits per year. Visit the department website at <https://www.clackamas.edu/cwe> or call 503-594-3511 for more information.

**CWE-281 COOPERATIVE WORK EXPERIENCE SEMINAR, 0 CREDIT**

The seminar provides an opportunity to develop the career management skills necessary to obtain, sustain, and advance in employment. Prepares students for career success. Variable Hours: 11-16 hours.

**Corequisites:** Program specific CWE course

REM	<b>CWE-281-02</b> 343633	<b>W</b>		<b>2-2:50 PM</b>		
	M. LAFORCE		\$0.00 \$0.00	\$0.00	\$0.00	
ONL	<b>CWE-281-05</b> 343634					
	J. MILLER		\$0.00 \$0.00	\$0.00	\$0.00	
Required: Student Petition. Restricted to Computer Science students. Contact: jen.miller@clackamas.edu or 503-594-3138.						
ONL	<b>CWE-281-06</b> 343635					
	J. STAPLETON		\$0.00 \$0.00	\$0.00	\$0.00	

**CWE-281ES SEMINARIO EXPERIENCIA DE TRABAJO COOPERATIVO, 0 CREDIT**

Est curso aumenta el potencial de los estudiantes para alcanzar el éxito profesional. Se requiere petición del estudiante.

**Corequisites:** ECE-280ES

Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
ONL ESPAÑOL	<b>CWE-281ES-01</b>	<b>343636</b>	A. ECHEVARRIA			\$0.00	\$0.00	\$0.00		\$0.00
Requerido: petición del estudiante.										

Criminal Justice

For more information on Criminal Justice, Corrections, credit for completion of D.P.S.S.T. or law enforcement academies contact Joanna Crawford at [tim.musgrave@clackamas.edu](mailto:tim.musgrave@clackamas.edu) or 503-594-6224.

<b>CJA-101</b>	<b>CRIMINOLOGY, 4 CREDITS</b>
Examines the social problem of crime, including the process of making and breaking laws as well as society's reaction to the phenomenon. Provides a multidisciplinary study of the causes of crime, including its distribution across social strata and demographics. Focuses on theories of criminal behavior and specific types of crime.	
ONL LCT	<b>CJA-101-01</b> <b>343616</b> T. BEARD
	\$520.00 \$52.00 \$0.00 \$572.00
ONL LCT	<b>CJA-101-02</b> <b>343617</b> T. MUSGRAVE
	\$520.00 \$52.00 \$0.00 \$572.00

<b>CJA-130</b>	<b>INTRODUCTION TO CORRECTIONS, 3 CREDITS</b>
Examines the history, organization, and development of corrections in the United States, including sentencing, incarceration, community corrections and the juvenile justice system. Reviews the use of the death penalty. Identifies trends in corrections.	
ONL LCT	<b>CJA-130-01</b> <b>343618</b> G. RONNING
	\$390.00 \$39.00 \$0.00 \$429.00

<b>CJA-200</b>	<b>COMMUNITY POLICING, 3 CREDITS</b>
Examines interrelationships and role expectations of agencies and public policy. Explores racial and community tension, bias-based policing, community policing, police misconduct, evidence-based policing and best practices in law enforcement.	
<b>Prerequisites:</b> CJA-110 with a C or better	
ONL LCT	<b>CJA-200-01</b> <b>343619</b> T. MUSGRAVE
	\$390.00 \$39.00 \$0.00 \$429.00

<b>CJA-203</b>	<b>CRISIS INTERVENTION, 3 CREDITS</b>
Examines crisis intervention as it applies to emergency service workers. Includes the psychodynamics of family crisis; alcohol/drug related problems; suicide; sexual assault victims; domestic violence; mentally disturbed individuals; neglected, battered, and abused children.	
HAR	<b>CJA-203-01</b> <b>348338 M</b> J. BIRKINBINE
	\$390.00 \$39.00 \$0.00 \$429.00

<b>CJA-206</b>	<b>TRAUMA INFORMED PRACTICES, 3 CREDITS</b>
In this course, students will learn how to recognize and respond to the impact of traumatic stress. Students will gain knowledge and skills they can infuse into their practices and act in a way that maximizes physical and psychological safety for clients and themselves. Students will understand how trauma impacts the brain, body, as well as development. Topics such as vicarious trauma, cultural trauma, and secondary trauma will be examined and discussed.	
<b>Recommended Prerequisites:</b> CJA-101 or HS-100 or any other 100-level course that discusses human behavior, development, or social interactions	

OC HYB LCT	<b>CJA-206-01</b> <b>343620 T</b> K. STORY
	\$390.00 \$39.00 \$0.00 \$429.00
Meets: 3/31, 4/14, 4/28, 5/12, 5/26.	

CJA-212 CRIMINAL INVESTIGATION III, 3 CREDITS

Continues the study and application of investigative techniques acquired in CJA-210 and CJA-211. Includes hands-on application of investigative processes from a practical aspect, including search warrant writing, fingerprinting, evidence collection, and crime scene photography, diagramming, and reconstruction.

HAR HYB	<b>CJA-212-01</b> <b>345573 M</b> A. MCMILLAN
	\$390.00 \$39.00 \$0.00 \$429.00

CJA-213 INTERVIEW & INTERROGATION, 3 CREDITS

Examines the dynamics of interviews and interrogations including common processes, approaches and techniques. Ethical, legal and psychological issues are also considered. Includes methods of how to analyze statements and behavior for deception and truthfulness.

HAR HYB	<b>CJA-213-01</b> <b>343621 M</b> T. MUSGRAVE
	\$390.00 \$39.00 \$0.00 \$429.00

CJA-216 IMPLICIT BIAS AND POLICING, 3 CREDITS

This course explores the concept of implicit bias and the potential influence of bias in law enforcement decision-making. Provides an overview of implicit bias assessments and their limitations. Students will develop skills to recognize and take action to manage bias and identify law enforcement practices that reduce bias and positively influence community relations.

ONL LCT	<b>CJA-216-01</b> <b>343623</b> T. MUSGRAVE
	\$390.00 \$39.00 \$0.00 \$429.00

CJA-232 CASE MANAGEMENT, 3 CREDITS

Introduces case management techniques used by corrections and human services professionals in one-on-one and group contacts with clients. Explores a variety of case management materials, with an emphasis placed upon objective case planning and monitoring.

Prerequisite or Corequisite: HS-156 and HS-210

ONL LCT	<b>CJA-232-01</b> <b>343624</b> C. BAKER
	\$390.00 \$39.00 \$0.00 \$429.00

CJA-250 REPORTING, RECORDING & TESTIFYING, 4 CREDITS

Surveys documentation skills in criminal justice professions. Verbal, nonverbal and written forms of criminal justice related workplace communication are studied and practiced, including communicating with the public, basic interviewing, documentation, courtroom testimony, and report writing.

Prerequisites: WR-121Z with a C or better

HAR HYB LCT	<b>CJA-250-01</b> <b>343625 T</b> S. HEALY
	\$520.00 \$52.00 \$0.00 \$572.00

CJA-270 CRIMINAL JUSTICE CAPSTONE, 3 CREDITS

This course applies and assesses the knowledge and skills gained by students who are completing the criminal justice program. Students will complete analyses of second year criminal justice courses, will review program learning outcomes, complete and present an e-portfolio, and take an exit examination.

Prerequisites: CJA-170

HAR HYB LCT	<b>CJA-270-01</b> <b>343626 M</b> T. MUSGRAVE
	\$390.00 \$39.00 \$20.00 \$449.00

## Criminal Justice

For more information on Criminal Justice, Corrections, credit for completion of D.P.S.S.T. or law enforcement academies contact Joanna Crawford at [jim.musgrave@clackamas.edu](mailto:jim.musgrave@clackamas.edu) or 503-594-6224.

### CJA-101 CRIMINOLOGY, 4 CREDITS

Examines the social problem of crime, including the process of making and breaking laws as well as society's reaction to the phenomenon. Provides a multidisciplinary study of the causes of crime, including its distribution across social strata and demographics. Focuses on theories of criminal behavior and specific types of crime.

ONL LCT	<b>CJA-101-01</b>	<b>343616</b>	T. BEARD			\$520.00	\$52.00		\$0.00	\$572.00
ONL LCT	<b>CJA-101-02</b>	<b>343617</b>	T. MUSGRAVE			\$520.00	\$52.00		\$0.00	\$572.00

### CJA-130 INTRODUCTION TO CORRECTIONS, 3 CREDITS

Examines the history, organization, and development of corrections in the United States, including sentencing, incarceration, community corrections and the juvenile justice system. Reviews the use of the death penalty. Identifies trends in corrections.

ONL LCT	<b>CJA-130-01</b>	<b>343618</b>	G. RONNING			\$390.00	\$39.00		\$0.00	\$429.00
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### CJA-200 COMMUNITY POLICING, 3 CREDITS

Examines interrelationships and role expectations of agencies and public policy. Explores racial and community tension, bias-based policing, community policing, police misconduct, evidence-based policing and best practices in law enforcement.

**Prerequisites:** CJA-110 with a C or better

ONL LCT	<b>CJA-200-01</b>	<b>343619</b>	T. MUSGRAVE			\$390.00	\$39.00		\$0.00	\$429.00
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### CJA-203 CRISIS INTERVENTION, 3 CREDITS

Examines crisis intervention as it applies to emergency service workers. Includes the psychodynamics of family crisis; alcohol/drug related problems; suicide; sexual assault victims; domestic violence; mentally disturbed individuals; neglected, battered, and abused children.

HAR	<b>CJA-203-01</b>	<b>348338 M</b>	J. BIRKINBINE			\$390.00	\$39.00	1:30 -2:50 PM	\$0.00	\$429.00
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### CJA-206 TRAUMA INFORMED PRACTICES, 3 CREDITS

In this course, students will learn how to recognize and respond to the impact of traumatic stress. Students will gain knowledge and skills they can infuse into their practices and act in a way that maximizes physical and psychological safety for clients and themselves. Students will understand how trauma impacts the brain, body, as well as development. Topics such as vicarious trauma, cultural trauma, and secondary trauma will be examined and discussed.

**Recommended Prerequisites:** CJA-101 or HS-100 or any other 100-level course that discusses human behavior, development, or social interactions

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**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
**NCT:** No-Cost Text



Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Time	Total	Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Time	Total	
		Instructor		Tuition	Fee	Crs. Fee			Instructor		Tuition	Fee	Crs. Fee	Total
CJA-280	CRIMINAL JUSTICE/CORRECTIONS/CWE, 2-6 CREDITS													
Cooperative work experience. Supervised experience in criminal justice, corrections, juvenile corrections, or related occupations. May be repeated for up to 6 credits. Required: Student Petition.														
Prerequisites: CJA-170														
Corequisites: CWE-281														
ONL	CJA-280-01	343627												
	G. RONNING		\$780.00	\$78.00	\$45.00	\$903.00V								
Required: Student Petition. Corequisite: Take the following CWE-281-06.														
Dental Assistant														
For more information, contact Health Sciences at <a href="mailto:healthsciences@clackamas.edu">healthsciences@clackamas.edu</a>														
DA-106	CLINICAL PROCEDURES III, 2 CREDITS													
This course provides an in-depth knowledge of dental specialties. Advanced and expanded dental assisting functions, tray set-ups and procedures in endodontics, periodontics, oral surgery, orthodontics and pedodontics are covered. Principles and procedures for amalgam and composite polishing will also be covered.														
Required: Acceptance into Dental Assistant program														
Prerequisites: DA-105 with a C or better														
Corequisites: DA-106L														
ONL	DA-106-01	343637												
	K. HIATT		\$260.00	\$26.00	\$225.00	\$511.00								
DA-106L	CLINICAL PROCEDURES III LAB, 1 CREDIT													
This course covers advanced and expanded dental assisting procedures in dental specialties. Tray set-up, dental materials and specific specialty procedures will be covered in the following dental specialties: orthodontic, periodontics, oral surgery and endodontics. Laboratory instruction in study casts will be taught on dental manikins.														
Required: Acceptance into Dental Assistant program														
Prerequisites: DA-105L with a C or better														
Corequisites: DA-106														
HAR	DA-106L-01	343638 TH												
	A. KOBYLINSKY		\$130.00	\$13.00	\$0.00	\$143.00								
HAR	DA-106L-02	348017 TH												
	A. KOBYLINSKY		\$130.00	\$13.00	\$0.00	\$143.00								
DA-130	CLINICAL PRACTICUM III, 8 CREDITS													
Supervised practice and improvement of advanced clinical skills in all areas of chairside dental assisting, laboratory procedures, specialties, radiology and Expanded Functions Dental Assisting (EFDA) procedures. Students report to their assigned site three days a week, for a minimum of twenty-four hours per week, for eleven weeks. Clinical competency skills in business office procedures will also be completed in this term. Students will be responsible to meet ten hours of community service. Students will also participate in 12 seminar hours during the term.														
Required: Acceptance into Dental Assistant program														
Prerequisites: DA-120 with a C or better														
HAR HYB	DA-130-01	343639 MTW												
	K. HIATT		\$1,040.0	\$104.00	\$250.00	\$1,394.00								
	A. KOBYLINSKY	0												
Required: Ten hours community service. Meets on Friday, April 10th for the Oregon Dental Conference.														
DA-135	PHARMACOLOGY/MEDICAL EMERGENCIES, 2 CREDITS													
This course is an introduction to pharmacology, common drugs used in dentistry, drug agencies, regulations, and drug actions. The properties of anesthetic, topical anesthetics, and desensitizing agents will also be covered. An in-depth level knowledge of the identification, response and management of medical and dental emergencies in the dental office will be taught utilizing educational manikin simulators.														
Required: Acceptance into Dental Assistant program														
HAR HYB	DA-135-01	343640 F												
	K. HIATT		\$260.00	\$26.00	\$50.00	\$336.00								
No in-person class week 2 or 10. Lectures will be posted online.														
DA-145	DENTAL OFFICE PROCEDURES, 2 CREDITS													
This course prepares the student for basic knowledge of dental office procedures to include dental charting. Introduction of dental software, management of patient information, maintenance and retention of business records, inventory and recall systems. Written and oral communication are taught to prepare students for employment opportunities.														
Required: Acceptance into Dental Assistant program														
HAR HYB	DA-145-01	343641 F												
	K. HIATT		\$260.00	\$26.00	\$40.00	\$326.00								
No in-person class week 2 or 10. Lectures will be posted online.														
Digital Media Communications														
DMC-104	DIGITAL VIDEO EDITING, 4 CREDITS													
Introduction to video editing skills that include logging and capturing raw video, assembly of shots on a timeline, and the use of effects in a final video sequence. Along with text generation, audio balancing, audio sweetening, and video compositing, this course will offer students an in-depth overview of the video editing process. The course will explore the history of editing and the theory behind various film and video editing forms. Lab component included.														
Recommended Prerequisites: WRD-090 or placement in WR-121Z														
OC LCT	DMC-104-01	344323 TTH												
	M. DEVENDORF		\$520.00	\$52.00	\$120.00	\$692.00								
DMC-107	ANIMATION & MOTION GRAPHICS II, 4 CREDITS													
This project-based course will explore intermediate aspects of experimental and new technological approaches to creating digital effects and animation for video and web-based applications. Students will learn intermediate features of Adobe After Effects to create successful motion graphics projects.														
Prerequisites: DMC-106														
Recommended Prerequisites: DMC-104, DMC-221, and DMC-225.														
Previous experience with computer graphics and digital video														
OC LCT	DMC-107-01	344327 MW												
	T. WASSON		\$520.00	\$52.00	\$120.00	\$692.00								
DMC-108	ANIMATION & MOTION GRAPHICS III, 4 CREDITS													
Continuation of the process of animation and motion graphics design. This project-based course explores advanced aspects of experimental and new technological approaches to creating digital effects and animation for video and web-based applications. The course presents advanced aspects of industry standard 3D and compositing software to create successful VFX, 3D Animation, and Motion Graphics projects.														
Prerequisites: DMC-107														
OC	DMC-108-01	344329 MW												
	T. WASSON		\$520.00	\$52.00	\$120.00	\$692.00								

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## Course Listing

2026/SP

Course No	Course Title, Credits					
Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time			
Instructor		Tuition	Fee	Crs. Fee	Total	

### DMC-147 MUSIC, SOUND & MOVIE MAKING, 1 CREDIT

Presents the basic components of designing, shooting, recording audio, and post production of movies as well as the history and theory that has led to contemporary film production.

OC	DMC-147-01	347975 F			6:30 -8:20 PM	
		S			9-5:50 PM	
	B. ROSE	\$130.00	\$13.00	\$99.00	\$242.00	
	Meets: 5/1 & 5/2.					

### DMC-222 ADVANCED 2D ANIMATION: DESIGN & TECHNIQUES, 4 CREDITS

Covers advanced principles of 2D animation using the latest industry standard software. The course will emphasize professional workflow and techniques of animation production for multimedia platforms. This includes visual development and pre-production, advanced character design and physics, advanced environment design, FX animation and post-production, portfolio presentation, and industry expectations.

**Prerequisites:** DMC-221 or Student Petition

OC LCT	DMC-222-01	344330 TTH			9-11:50 AM	
	T. WASSON	\$520.00	\$52.00	\$120.00	\$692.00	

### DMC-225 COMPUTER GRAPHICS I, 4 CREDITS

Introduction to the use of digital graphics programs. Photo manipulation, illustration, and compositing techniques will be explored. Design principles and creative composition will be emphasized. Historical and contemporary issues related to graphic design aesthetics will be considered.

**Recommended Prerequisites:** ART-115

ONL LCT	DMC-225-01	344332				
	B. THWING	\$520.00	\$52.00	\$120.00	\$692.00	

### DMC-226 COMPUTER GRAPHICS II, 4 CREDITS

Continue exploring the processes of digital graphics programs. More advanced aspects of image compositing, bit mapping, layering, and using channels in Photoshop. More advanced aspects of vector graphics creation and document creation in Illustrator and InDesign. Creative problem solving, design applications and contemporary issues will be explored. Historical reference and current trends in digital media will continue to be examined.

**Prerequisites:** DMC-225

OC LCT	DMC-226-01	344333 TTH			1-3:50 PM	
	T. WASSON	\$520.00	\$52.00	\$120.00	\$692.00	

### DMC-227 COMPUTER GRAPHICS III, 4 CREDITS

Advanced use of multi-digital formats to create images, compositions and documents. Develop a design portfolio. Design principles, creative problem solving, historical and contemporary issues in graphics and aesthetics will be analyzed.

**Prerequisites:** DMC-226

OC LCT	DMC-227-01	344335 TTH			1-3:50 PM	
	T. WASSON	\$520.00	\$52.00	\$120.00	\$692.00	

### DMC-242 FIELD RECORDING FOR MEDIA, 1 CREDIT

This course offers students interested in recording and sweetening audio for film an opportunity to work with student film crews during the shooting and editing process.

Course No	Course Title, Credits					
Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time			
Instructor		Tuition	Fee	Crs. Fee	Total	

OC LCT	DMC-242-01	343613 F			6:30 -8:20 PM	
		S			9-5:50 PM	
	B. ROSE	\$130.00	\$13.00	\$90.00	\$233.00	
	Meets: 4/17 & 4/18.					

### DMC-265 ADVANCED DIGITAL FILMMAKING, 4 CREDITS

This course emphasizes advanced filmmaking skills. Students will produce short films from written scripts.

**Prerequisites:** DMC-264

OC LCT	DMC-265-01	344336 MW			1-3:50 PM	
	M. DEVENDORF	\$520.00	\$52.00	\$120.00	\$692.00	

### DMC-280 DIGITAL MEDIA COMMUNICATIONS/CWE, 3-6 CREDITS

Cooperative work experience. Provides students with on-the-job work experience in the field of media studies. Required: Student Petition.

**Corequisites:** CWE-281

ONL LCT	DMC-280-01	344337				
	T. WASSON	\$780.00	\$78.00	\$45.00	\$903.00V	
	Required: Student Petition.					

### DMC-292 DIGITAL MEDIA COMMUNICATIONS PORTFOLIO PROJECT II, 4 CREDITS

This course is a group-focused portfolio project class for Digital Media Communications (DMC) students. The purpose of this course is to provide students the opportunity to combine their skills, knowledge, and special interests in development of a collaboratively planned and produced original work representative of more than one of the focus areas in the DMC program. The process of portfolio production at this level includes working with peers in designing, planning, refining and completing a group project. Students will also further develop their professional online portfolio (website) to represent their skills in their DMC focus area in preparation for internships and employment.

**Prerequisites:** DMC-291

OC LCT	DMC-292-01	344340 MW			9-11:50 AM	
	M. DEVENDORF	\$520.00	\$52.00	\$120.00	\$692.00	

## Economics

### EC-201Z PRINCIPLES OF MICROECONOMICS, 4 CREDITS

Examines how consumers and firms make choices when facing scarce resources, and how those choices are related to government policy and market outcomes, such as prices and output.

**Prerequisites:** MTH-020 or placement in MTH-098

**Prerequisite or Corequisite:** WRD-098 or placement in WR-121Z

OC NCT	EC-201Z-01	344264 MW			10-11:50 AM	
	D. LOUGEE	\$520.00	\$52.00	\$0.00	\$572.00	
ONL NCT	EC-201Z-02	344266				
	D. LOUGEE	\$520.00	\$52.00	\$0.00	\$572.00	

### EC-202Z PRINCIPLES OF MACROECONOMICS, 4 CREDITS

Examines the aggregate activity of a market economy, economic growth, inflation, unemployment, and the use of fiscal and monetary policy to address macroeconomic problems.

**Prerequisites:** MTH-020 or placement in MTH-050 or MTH-060

**Prerequisite or Corequisite:** WRD-098 or placement in WR-121Z

OC NCT	EC-202Z-01	344268 MW			1-2:50 PM	
	D. LOUGEE	\$520.00	\$52.00	\$0.00	\$572.00	
ONL NCT	EC-202Z-02	344271				
	M. PARTAPURWALA	\$520.00	\$52.00	\$0.00	\$572.00	

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Course No	Course Title, Credits					
Section No	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Time			
Instructor		Tuition	Fee	Crs. Fee	Total	

## Education

### ECE-114ES MATEMÁTICAS Y CIENCIAS PARA NIÑOS PEQUEÑOS, 3 CREDITS

Este curso se enfoca en el aprendizaje de matemáticas y ciencias para niños pequeños. Se explorarán los componentes de matemáticas y ciencias. Se hará hincapié en las estrategias de enseñanza apropiadas para promover el conocimiento de las matemáticas y las ciencias en los niños. Se explorará el entorno físico del salón de clase para que éste fomente el aprendizaje de las matemáticas y las ciencias.

**Prerequisites:** ECE-240ES and HDF-247ES

REM ESPAÑOL	ECE-114ES-01 344274 W	6-7:50 PM				
	D. TORRADO	\$390.00	\$39.00	\$0.00	\$429.00	
	La clase se reúne seis miércoles por Zoom (4/2, 4/16, 4/30, 5/14, 5/28, 6/11) de 6:00PM a 7:50PM.					

### ECE-121ES OBSERVACIÓN Y ORIENTACIÓN I EN EDUCACIÓN TEMPRANA, 4 CREDITS

El curso está diseñado para ayudar a los estudiantes a explorar en profundidad las técnicas de observación y registro del desarrollo y aprendizaje de los niños. Se examinan varias técnicas de orientación infantil para niños desde el nacimiento hasta el 3er grado. Los estudiantes recibirán estrategias para ayudarles a proporcionar orientaciones positivas a los niños en función de diferentes de escenarios y situaciones.

REM ESPAÑOL	ECE-121ES-01CMP	344276 TH	6-7:50 PM			
	L. JAMES	\$520.00	\$52.00	\$0.00	\$572.00	
	La clase se reúne seis jueves por Zoom (4/2, 4/16, 4/30, 5/14, 5/28, 6/11) de 6:00PM a 7:50PM.					

### ECE-154ES DESARROLLO DEL LENGUAJE Y LA ALFABETIZACIÓN, 4 CREDITS

Se centra en el desarrollo del lenguaje y la alfabetización de los niños desde el nacimiento hasta tercer grado. Se examinarán las bases de la investigación y los componentes del desarrollo del lenguaje y la alfabetización. Se explorarán los criterios para seleccionar literatura infantil de calidad. Se enfatizarán estrategias prácticas para promover un desarrollo óptimo.

**Prerequisites:** FYE-101ES

REM ESPAÑOL	ECE-154ES-01 344282 M	6-7:50 PM				
	M. GARCIA AVILEZ	\$520.00	\$52.00	\$0.00	\$572.00	
	La clase se reúne seis lunes por Zoom (3/31, 4/14, 4/28, 5/12, 6/2, 6/9) de 6:00PM a 7:50PM.					

### ECE-179 THE PROFESSIONAL IN EARLY CHILDHOOD EDUCATION AND FAMILY STUDIES, 4 CREDITS

This course focuses on the role of the professional in Early Childhood Education (ECE). Students will explore the National Association for the Education of Young Children's Code of Ethical Conduct, the professional standards and competencies expected for ECE professionals. Students will discuss advocacy strategies and how to engage in intentional, reflective practice. Students will also create a professional portfolio to demonstrate their commitment to professionalism.

**Prerequisites:** ECE-150, ECE-221, ECE-240, ECE-280, ED-246, and HDF-247

ONL LCT	ECE-179-01	344284				
	S. MYERS	\$520.00	\$52.00	\$0.00	\$572.00	
	Meets: 3/30-5/3.					

**Campus Locations:**  
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**OC:** Oregon City Campus  
**WILS:** Wilsonville Training Center  
**OFF:** Other Off-Campus Location

**Distance Education Notification:**  
**ONL:** Online Only  
**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

Course No	Course Title, Credits					
Section No	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Time			
Instructor		Tuition	Fee	Crs. Fee	Total	

### ECE-239 TRAUMA-INFORMED PRACTICES IN EARLY CARE AND EDUCATION, 3 CREDITS

Develops knowledge and skills that support the learning and development of young children, birth to age 8, who have been adversely impacted by trauma. Explores types and symptoms of trauma, and emphasizes trauma-informed practices that can be applied in the child's home and school setting. Identifies available resources and recognized strategies for working collaboratively with families and other professionals.

**Prerequisites:** ECE-150 and HDF-225

ONL LCT	ECE-239-01	344291				
	D. GLASCOCK	\$390.00	\$39.00	\$0.00	\$429.00	
	Meets: 4/1-5/5.					

### ECE-240 ENVIRONMENTS AND CURRICULUM PLANNING, 4 CREDITS

Focuses on an introduction of creating learning environments and curriculum for children from three years old through five years old in home or center-based programs. Course covers theories and relationships between physical and social space, activities, experiences, and materials. Students are introduced to the use of developmentally and culturally appropriate practices in planning and selecting environments and curriculum for young children.

**Prerequisites:** ECE-150, ECE-235, and HDF-225

REM	ECE-240-01	344296 W	5:30 -7:20 PM			
	B. KING	\$520.00	\$52.00	\$0.00	\$572.00	
	This class meets on six Wednesdays via Zoom (4/1, 4/15, 4/29, 5/13, 5/27, 6/10) from 5:30PM-7:20PM.					

### ECE-240ES AMBIENTES Y PLANIFICACIÓN CURRICULAR, 4 CREDITS

Se enfoca en una introducción a la creación de entornos de aprendizaje y planes de estudio para niños de tres a cinco años de edad en programas basados en hogares o centros. El curso cubre las teorías y las relaciones entre el espacio físico y social, las actividades, las experiencias y los materiales. Se enseña a los estudiantes el uso de prácticas adecuadas para el desarrollo y la cultura en la planificación y la selección de entornos y planes de estudio para niños pequeños.

**Prerequisites:** ECE-150ES, ECE-235ES, FYE-101ES, HDF-247ES, and WR-124ES

REM LCT ESPAÑOL	ECE-240ES-01 344297 S	10:30 -12:20 PM				
	Y. SANCHEZ	\$520.00	\$52.00	\$0.00	\$572.00	
	La clase se reúne seis sábado por Zoom (4/4, 4/18, 5/2, 5/16, 5/30) de 10:30AM a 12:20PM.					

### ECE-246ES RELACIONES ENTRE LA ESCUELA, LA FAMILIA Y LA COMUNIDAD, 4 CREDITS

Este curso se concentra en el conocimiento y las habilidades para trabajar eficazmente con las familias y la comunidad y con otros profesionales en educación infantil (6 semanas de edad hasta tercer grado). El énfasis está en construir y mantener relaciones positivas para fomentar la cooperación y el respeto mutuo entre los profesionales en la primera infancia y las familias de los niños con quienes trabajan.

REM ESPAÑOL	ECE-246ES-01 344300 M	6-7:50 PM				
	B. MARRON	\$520.00	\$52.00	\$0.00	\$572.00	
	La clase se reúne cinco lunes por Zoom (3/31, 4/14, 4/28, 5/12, 6/2, 6/9) de 6:00 PM a 7:50pm.					

### ECE-254ES ESTRATEGIAS DE INSTRUCCIÓN PARA ESTUDIANTES DE DOS IDIOMAS, 4 CREDITS

**Other Coding Translations:**  
**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total
Instructor	Tuition	Fee	Crs. Fee			
Este curso examina enfoques pedagogicos y culturales que conducen a un desarrollo exitoso del dominio del idioma ingles, idioma usado en la casa, y reconocimiento del contenido por los niños cuyo idioma en el hogar no es el inglés. Se enfoca en el niño desde su nacimiento hasta la escuela primaria.						
Prerequisites: ECE-154ES and ECE-240ES						
REM ECE-254ES-01 344301 S	8-9:50 AM					
M. GARCIA AVILEZ	\$520.00	\$52.00	\$0.00	\$572.00		
La clase se reúne seis sábados por Zoom (4/5, 4/19, 5/3, 5/17, 5/31, 6/7) de 9:00AM a 10:50AM.						
ECE-258ES	EQUIDAD Y DIVERSIDAD EN LA EDUCACIÓN INFANTIL, 4 CREDITS					
Este curso se enfoca en promover y honrar la diversidad y la equidad en la educación infantil. El enfoque será en colaborar con familias diversas, establecer ámbitos culturales y lingüísticos que sean diversificados y promuevan una autoidentificación positiva en los niños pequeños.						
Prerequisites: ECE-150ES, ECE-235ES, and FYE-101ES						
REM LCT ECE-258ES-01 344304 W	6-7:50 PM					
B. MARRON	\$520.00	\$52.00	\$0.00	\$572.00		
La clase se reúne seis miércoles por Zoom (4/2, 4/16, 4/30, 5/14, 5/28, 6/11) de 6:00PM a 7:50PM.						
ECE-280	EARLY CHILDHOOD EDUCATION/CWE, 3 CREDITS					
Cooperative work experience. Provides students with on-the-job experience in the field of early childhood education. Students will work in pre-approved educational settings that serve children from six weeks old through age eight. Required: Student Petition.						
Corequisites: CWE-281						
Prerequisites: ECE-121, ECE-150, and ECE-154						
oc ECE-280-01 344308						
D. GLASCOCK	\$390.00	\$39.00	\$45.00	\$474.00		
Required: Student Petition. Contact: denise.glascock@clackamas.edu or 503-594-3488. Corequisite: Take the following CWE-281-06.						
ECE-280ES	EXPERIENCIA LABORAL COOPERATIVA, 4 CREDITS					
En este curso, los estudiantes completan 144 horas de trabajo en un entorno de primera infancia, asistiendo a niños y familias desde el nacimiento hasta los 8 años de edad. Si no completan las horas requeridas, recibirá un curso incompleto o reprobará.						
Corequisites: CWE-281ES						
REM ECE-280ES-01 344310 M	6-7:50 PM					
A. ECHEVARRIA	\$520.00	\$52.00	\$45.00	\$617.00		
Requerido: petición del estudiante.						
ECE-292	PRACTICUM III, 4 CREDITS					
Focuses on field experiences for early childhood education students in a variety of educational settings, serving children from birth through kindergarten. This course allows students to deepen and apply their knowledge, methods, and skills gained from early childhood education and family studies courses as well as the previous terms of practicum and CWE. The course covers continuing observation/assessment, assisting the supervising teacher in implementing an integrated approach to curriculum with attention paid to working with diverse children and their families. Students will complete their professional portfolio in this course, documenting how they have achieved the program learning outcomes. Required: Student Petition.						
Prerequisites: ECE-154, ECE-221, ECE-240, ED-254, and ECE-291						

Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total
Instructor	Tuition	Fee	Crs. Fee			
OC HYB LCT ECE-292-01 344312 TH	5:30 -7:20 PM					
B. KING	\$520.00	\$52.00	\$0.00	\$572.00		
Required: Student Petition. Meets 4/2, 4/16, 4/30, 5/14, 5/28, and 6/11.						
ECE-292ES	PRACTICUM III, 4 CREDITS					
Este curso se enfoca en la experiencia de trabajo de los estudiantes con varios entornos educacionales en salones de clases enfocadas directamente con la enseñanza y supervisión de niños desde el nacimiento hasta el kínder. Este curso permite a los estudiantes aplicar conocimientos y metodologías adquiridas en los cursos de educación infantil, y sean transferibles a las habilidades requeridas en un ambiente educacional entre 0 a 8 años de edad. Los seminarios obligatorios abarcan la revisión de los dominios del desarrollo, los ámbitos de aprendizaje, las experiencias reales en el salón de clases, resolución de problemas, desarrollo del plan de estudios, técnicas de evaluación y la orientación del aprendizaje y la conducta de los niños.						
Prerequisites: ECE-291ES						
REM ECE-292ES-01 344315 M	6-7:50 PM					
A. ECHEVARRIA	\$520.00	\$52.00	\$0.00	\$572.00		
Requerido: petición del estudiante. La clase se reúne cinco lunes por Zoom (3/30, 4/13, 4/27, 5/11, 6/8) de 6:00PM a 7:50PM.						
ED-101	INTRO TO EDUCATION PRACTICUM & SEMINAR, 4 CREDITS					
This seminar presents critical topics associated with the Education profession. Each topic will be introduced with an understanding that future Education classes will expand student comprehension and knowledge to a mastery level. Students are also required to participate in a 60 hour practicum experience in a K-12 school to provide the opportunity to gain experience with the various educational issues discussed in class. Required: Student Petition.						
oc ED-101-01 344317 T	10-11:50 AM					
L. SCOTT	\$520.00	\$52.00	\$0.00	\$572.00		
Required: Student Petition.						
ED-216	FOUNDATIONS OF TEACHING & EDUCATION, 4 CREDITS					
Provides an overview of the educational system in the U.S. including historical, legal, and philosophical foundations of education. Explores the financing, governance and organization of education as well as current issues impacting our educational system. Provides an overview of diversity in educational settings and the characteristics and ethical obligations of effective schools and professional educators. Examines career options and pathways in the field of education.						
ONL ED-216-01 344322						
L. SCOTT	\$520.00	\$52.00	\$0.00	\$572.00		
ED-220	INTRODUCTION TO CTE IN OREGON, 3 CREDITS					
Provides an introduction to the field of Career and Technical Education (CTE) in Oregon. Examines the historical and legislative foundations of CTE in the United States. Discusses the role of special populations in CTE programs. Provides an overview of high quality CTE programs, CTE licensure preparation, and student organizations. Addresses current trends and issues in the field.						
ONL LCT ED-220-01 344324						
M. HELZERMANN	\$390.00	\$39.00	\$0.00	\$429.00		

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Section No		Crs Reg.	Days (M,T,W,Th,F,S,SU)			Time	Section No		Crs Reg.	Days (M,T,W,Th,F,S,SU)			Time	Section No		Crs Reg.	Days (M,T,W,Th,F,S,SU)			Time	Section No		Crs Reg.	Days (M,T,W,Th,F,S,SU)			Time	
Instructor			Tuition	Fee	Crs. Fee	Total	Instructor			Tuition	Fee	Crs. Fee	Total	Instructor			Tuition	Fee	Crs. Fee	Total	Instructor			Tuition	Fee	Crs. Fee	Total	
ED-246	SCHOOL, FAMILY & COMMUNITY RELATIONS, 4 CREDITS																											
This course focuses on the knowledge and skills to work effectively with families and community professionals in early childhood education (6 weeks of age through 3rd grade). Emphasis is on building and maintaining positive relationships to foster cooperation and mutual respect between early childhood professionals and the families of the children with whom they are working.																												
ONL	ED-246-01	345577																										
	B. KING		\$520.00	\$52.00	\$0.00	\$572.00																						
ED-258	CULTURALLY RESPONSIVE TEACHING & EDUCATION, 3 CREDITS																											
Explores historical and systemic inequities in U.S. society and how they impact students, schools, and communities. Provides an overview of the ways in which educators can select culturally appropriate pedagogy, materials, and curriculum in order to serve the needs of an increasingly diverse U.S. educational system. Applies this knowledge in creating classrooms and schools where all students, families, and communities are valued, belong, and thrive.																												
ONL	ED-258-01	344325																										
	L. SCOTT		\$390.00	\$39.00	\$0.00	\$429.00																						
Two books. One is an online textbook included in section fees, the second is available at the Bookstore.																												
Educational Focus Area																												
EFA-101J	INTRODUCTION TO THE SOCIAL SCIENCES, HUMAN SERVICES AND CRIMINAL JUSTICE, 2 CREDITS																											
Introduces career options and educational pathways in the fields of the Social Sciences, Human Services and Criminal Justice. Explores the history of and current methods and issues in these three areas of learning and service. Students will gain an understanding of academic and career options and get a taste of what further study will look like in each of these three areas and how they relate to one another.																												
OC LCT	EFA-101J-01	343795 W																										
	Y. SMITH		\$260.00	\$26.00	\$0.00	\$286.00																						
No textbook required.																												
Electronics & Microelectronics																												
All degree seeking students should arrange to speak to a faculty advisor prior to registering. Call 503-594-3318 for more information, or contact Advising, 503-594-3475.																												
EET-114	ELECTRONIC EQUIPMENT AND ASSEMBLY III, 1 CREDIT																											
This is the third course in a three course sequence with a focus on soldering skills. Through-hole and SMT techniques will be introduced.																												
Prerequisites: EET-113																												
OC	EET-114-01	344341 MW																										
	B. PALACIOS		\$130.00	\$13.00	\$43.75	\$186.75																						
EET-139	PRINCIPLES OF TROUBLESHOOTING I, 2 CREDITS																											
Emphasizes theories and practices useful in troubleshooting failures in electrical applications. Focuses on the overall philosophy and strategy of troubleshooting, drawing applications from residential and varied industrial situations. Includes laboratory projects.																												
Recommended Prerequisite or Corequisite: EET-112, and EET-137 or MFG-130																												
OC	EET-139-01	344343 MW																										
	M. BABCOCK		\$260.00	\$26.00	\$87.00	\$373.00																						
EET-142	ELECTRICAL FUNDAMENTALS III, 4 CREDITS																											
Covers sinusoidal functions and phasors and complex impedance. Analyze systems to determine AC circuit parameters and complex power. Circuits contain voltage and current sources, resistors, inductors, and transformers.																												
Prerequisites: EET-141																												
Recommended Prerequisite or Corequisite: MTH-112Z																												
OC	EET-142-01	344346 MW																										
	M. FARRELL		\$520.00	\$52.00	\$174.00	\$746.00																						
EET-234	PROGRAMMABLE LOGIC CONTROLLERS II, 3 CREDITS																											
An advanced course of study that will develop the student's understanding of Programmable Logic Controllers (PLC) in more detailed Industrial applications through lectures, labs and hands-on examples. This course will emphasize advanced PLC functions and data sets, networking schemes and human machine interfaces.																												
Prerequisites: EET-233																												
OC	EET-234-01	344348 F																										
	B. GARDNER		\$390.00	\$39.00	\$131.25	\$560.25																						
EET-235	MECHATRONICS II, 2 CREDITS																											
This course expands on advanced electromechanical principles with applications in manufacturing and industrial systems. Students will study the applications of Proportional Integral Differential (PID) controllers for motion and process control and the electromechanical components that are integral to industrial machinery.																												
Prerequisites: EET-225																												
OC	EET-235-01	344350 MW																										
	J. TRAVER		\$260.00	\$26.00	\$87.50	\$373.50																						
EET-250	LINEAR CIRCUITS, 3 CREDITS																											
Introduction to the operation and functions of operational amplifiers and linear devices. Design and circuit analysis of op-amps, comparators, converters and special purpose linear devices. Industry standard devices will be used.																												
Prerequisites: EET-227																												
OC	EET-250-01	344353 MW																										
	J. KUEBLER		\$390.00	\$39.00	\$130.50	\$559.50																						
EET-254	INTRODUCTION TO MICROCONTROLLERS, 3 CREDITS																											
Introduction to processor architecture and microcontrollers. Internal structure, registers, busses, control unit. Clock, machine and instruction cycling timing, interrupts and DMA. Instruction set, mnemonics, functions, and assembly language programming. Interfacing to external memory and I/O on-chip peripherals.																												
Prerequisites: EET-157																												
Recommended Prerequisites: EET-257																												
OC	EET-254-01	344354 MW																										
	B. PALACIOS		\$390.00	\$39.00	\$130.50	\$559.50																						
SM-170	SEMICONDUCTOR PROCESSING III, 2 CREDITS																											
Covers the essential process and equipment issues related to the etching, diffusion and ion implantation. Troubleshooting of common equipment and process related problems are emphasized.																												
Recommended Prerequisites: SM-150																												
ONL	SM-170-01	344608																										
	W. SELLEVAAG		\$260.00	\$26.00	\$87.00	\$373.00																						

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**ESPAÑOL:** Enseñado en español  
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Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
<b>SM-229</b>	<b>VACUUM TECHNOLOGY, 2 CREDITS</b>								
	Focuses on elementary theory and practice of vacuum equipment for microelectronics processing. Students study vacuum fundamentals, pumps, and equipment used in vacuum systems.								
	<b>Recommended Prerequisites:</b> SM-150								
ONL	<b>SM-229-01</b> 344609								
	W. SELLEVAAG				\$260.00	\$26.00	\$87.00		\$373.00
<b>SM-280</b>	<b>ELECTRONICS &amp; MICROELECTRONICS/CWE, 1-6 CREDITS</b>								
	Cooperative work experience. Practical experience in the high-tech industry. Coordination of instruction will occur with industry and the manufacturing and cooperative work departments. Required: Student Petition.								
	<b>Corequisites:</b> CWE-281								
ONL	<b>SM-280-01</b> 344610								
	C. CONNORS				\$780.00	\$78.00	\$255.00	\$1,113.00	
	Required: Student Petition. Restricted: Microelectronics or electronics students. Corequisite: Take the following CWE-281-06.								
<b>Emergency Management Professional</b>									
<b>EMP-210</b>	<b>DEVELOPING AND MANAGING VOLUNTEER RESOURCES, 4 CREDITS</b>								
	This course will focus on methods and procedures for involving private-sector organizations and volunteers in emergency management programs in ways which benefit the whole community. The focus of the course is on maximizing the effectiveness of volunteer resources by implementing a people-oriented system that addresses defining volunteer roles, designing a plan of action, recruiting volunteers, training individuals who volunteer and motivation and maintenance of a successful program. Participants will acquire skills and knowledge to make appropriate volunteer assignments that enhance the effectiveness of an integrated emergency management system.								
ONL	<b>EMP-210-01</b> 347991								
	TBA				\$520.00	\$52.00	\$0.00		\$572.00
<b>EMP-212</b>	<b>PUBLIC HEALTH AND MEDICAL EMERGENCY MANAGEMENT, 3 CREDITS</b>								
	The course examines the issues and concepts that make up the field of public health and how public health agencies and organizations prepare for and support disaster response. It will examine the intersection of security and public health policy, threats to public health, legal and policy infrastructure and the tools that are available to improve preparedness, response and recovery efforts.								
ONL	<b>EMP-212-01</b> 348083								
	J. MERTEN				\$390.00	\$39.00	\$0.00		\$429.00
<b>EMP-218</b>	<b>PUBLIC INFORMATION OFFICER AND EXTERNAL AFFAIRS, 2 CREDITS</b>								
	This course is designed to familiarize students with the concepts underlying the Public Information Officer (PIO) role. This course provides a basic understanding of the PIO function. Provide those in executive level roles the necessary knowledge of PIO roles and responsibilities during an emergency.								
ONL	<b>EMP-218-01</b> 347992								
	M. STRAUCH				\$260.00	\$26.00	\$0.00		\$286.00
<b>EMT-102</b>	<b>EMERGENCY MEDICAL TECHNICIAN PART II, 6 CREDITS</b>								
	This course is the second of the two-part series that will prepare students to enter the workforce as an emergency medical service provider. Topics include patient assessment, treatment/stabilization for environmental and trauma emergencies, providing emergency care to special patient populations, and EMS operations. Includes 20 hours of observational time in an emergency department and with an EMS unit. Upon successful completion, students will qualify to take the National Registry of Emergency Medical Technicians cognitive certification exam.								
	<b>Required:</b> Acceptance into EMT cohort								
	<b>Prerequisites:</b> EMT-101 with a C or better								
HAR	<b>EMT-102-01</b> 343643								
	T. SAWZAK			MWF	\$780.00	\$78.00	\$400.00	1-4:20 PM	\$1,258.00
<b>EMT-105</b>	<b>INTRODUCTION TO EMERGENCY MEDICAL SERVICES, 3 CREDITS</b>								
	Introduces the student to Emergency Medical Services (EMS). Explores the career pathways for EMTs and Paramedics. Examines the history, structure, and function of our modern-day EMS system. Includes provider roles and responsibilities, operations, safety, legal considerations, and career opportunities. In addition, this class provides a foundation for the EMT certification course by including a review of anatomy and physiology; where things are and how they are supposed to work, pathophysiology; what happens when disease or injury causes those systems to fail, and patient assessment; how EMS providers evaluate for those conditions and make treatment and transport decisions.								
ONL	<b>EMT-105-01</b> 343644								
	T. SAWZAK				\$390.00	\$39.00	\$0.00		\$429.00
ONL	<b>EMT-105-02</b> 343645								
	T. SAWZAK				\$390.00	\$39.00	\$0.00		\$429.00
<b>EMT-109</b>	<b>EMERGENCY RESPONSE COMMUNICATION/DOCUMENTATION, 2 CREDITS</b>								
	Covers principles of communication via verbal, written and electronic modes in the provision of EMS. Documentation of the elements of patient assessment, patient care and transport, communication systems, radio types, reports, codes and correct techniques.								
	<b>Prerequisites:</b> EMT-101								
ONL	<b>EMT-109-01</b> 343646								
	S. COOPER				\$260.00	\$26.00	\$0.00		\$286.00
<b>Engineering</b>									
<b>ENGR-111</b>	<b>INTRODUCTION TO ENGINEERING, 3 CREDITS</b>								
	Introduction to the basic ideas and tools of the engineering profession. An exploration of career and education options within the field, and the skills needed to achieve career goals. Methods of engineering analysis, design, and problem solving culminating in a design project. The class will cover all facets of engineering design, including background research, requirement specification and prioritization, development, prototype construction, testing, and evaluation for future redesigns.								
	<b>Prerequisite or Corequisite:</b> MTH-111Z or higher								
OC LCT	<b>ENGR-111-01</b> 344355								
	E. LEE			TTH	\$390.00	\$39.00	\$10.00	1-2:20 PM	\$439.00
<b>ENGR-112</b>	<b>ENGINEERING PROGRAMMING, 3 CREDITS</b>								

## Emergency Medical Technology

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**Other Coding Translations:**  
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**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
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Course No	Course Title, Credits					Course No	Course Title, Credits				
	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total		Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total
	Instructor		Tuition	Fee	Crs. Fee		Instructor		Tuition	Fee	Crs. Fee
Introduction to basic scientific and engineering computing. Covers methods of engineering analysis, design, and problem solving with computational tools. Emphasis on developing proficiency in writing functions and programs.						<b>ENGR-223L ELECTRICAL CIRCUIT ANALYSIS III LAB, 0 CREDIT</b>					
<b>Prerequisite or Corequisite:</b> MTH-112Z or higher						Lab course for ENGR-223					
						<b>Corequisites:</b> ENGR-223					
						<b>Recommended Prerequisite or Corequisite:</b> MTH-256					
oc	<b>ENGR-112-01</b>	<b>344358 TTH</b>			<b>10-11:20 AM</b>	oc	<b>ENGR-223L-01</b>	<b>344372 TTH</b>		<b>10:30 -11:50 AM</b>	
	E. LEE		\$390.00	\$39.00	\$0.00		M. FARRELL		\$0.00	\$0.00	\$0.00
<b>ENGR-115 ENGINEERING GRAPHICS, 3 CREDITS</b>						<b>ENGR-271 DIGITAL SYSTEMS, 4 CREDITS</b>					
This course will emphasize the practical application of engineering graphics techniques for the design, maintenance, and modification of mechanical parts and assemblies. Students will both generate new models based on design intent and translate existing physical objects into graphical 3D models, documenting their work with 2D engineering drawings according to ASME standards. Includes isometric views, dimensioning, and simulation.						The second course in digital design. Explores synchronous state machine and memory system design and analysis. Timing analysis and design for test techniques are introduced. Uses computer-based tools for logic system development and simulation. Reinforces systemic design methodology.					
<b>Prerequisites:</b> MTH-060 or higher						<b>Prerequisites:</b> ENGR-171					
						<b>Recommended Prerequisites:</b> ENGR-112					
oc	<b>ENGR-115-01</b>	<b>344361 TTH</b>			<b>8:30 -9:50 AM</b>	oc	<b>ENGR-271-01</b>	<b>344373 MF</b>		<b>9-11:50 AM</b>	
	C. CONNORS		\$390.00	\$39.00	\$35.00		M. FARRELL		\$520.00	\$52.00	\$0.00
<b>ENGR-201 ELECTRICAL FUNDAMENTALS, 4 CREDITS</b>						<b>English for Speakers of Other Languages</b>					
A study of basic electrical circuit theory. Analysis of voltage and current relationships. Covers circuit parameters of resistance, inductance, and capacitance. Includes basic DC, AC, and natural response of circuits. This course is not intended for Electrical or Computer Engineering majors.						<b>ESOL-012 BEGINNING ESOL, 0 CREDIT</b>					
<b>Corequisites:</b> ENGR-201L						English language learners speak and listen to simple words, phrases, questions, statements and commands using common English vocabulary in simple, highly-structured tasks. Aligns with the Oregon Adult English Language Proficiency Standards, Level 1 and the Oregon Adult College and Career Readiness Standards Reading Foundational Skills. Variable Hours: 48-66 hours. Required: Student Petition.					
<b>Prerequisites:</b> MTH-252Z											
oc	<b>ENGR-201-01</b>	<b>344363 MW</b>			<b>9-10:20 AM</b>	OC LCT	<b>ESOL-012-01</b>	<b>343802 TTH</b>		<b>9-11:50 AM</b>	
	E. LEE		\$520.00	\$52.00	\$0.00		D. VERMILLION		\$0.00	\$0.00	\$60.00
<b>ENGR-201L ELECTRICAL FUNDAMENTALS LAB, 0 CREDIT</b>						Required: Student Petition.					
Lab course for ENGR-201						HAR LCT	<b>ESOL-012-06</b>	<b>343809 TTH</b>		<b>6-8:50 PM</b>	
<b>Corequisites:</b> ENGR-201							L. ROWE		\$0.00	\$0.00	\$60.00
oc	<b>ENGR-201L-01</b>	<b>344365 MW</b>			<b>10:30 -11:50 AM</b>	Required: Student Petition.					
	E. LEE		\$0.00	\$0.00	\$0.00	HAR LCT	<b>ESOL-012-07</b>	<b>343812 TTH</b>		<b>6-8:50 PM</b>	
<b>ENGR-213 STRENGTH OF MATERIALS, 4 CREDITS</b>							K. HOLLOWAY		\$0.00	\$0.00	\$60.00
Introduces the relation of externally applied loads and their internal effects on deformable bodies, such as columns, shafts, beams and statically indeterminate structures or systems made up of such members.						Required: Student Petition.					
<b>Prerequisites:</b> ENGR-211						<b>ESOL-013 BEGINNING ESOL, 0 CREDIT</b>					
oc	<b>ENGR-213-01</b>	<b>344367 MW</b>			<b>3-4:50 PM</b>	English language learners speak and listen to simple words, phrases, questions, statements and commands using common English vocabulary in simple, highly-structured tasks. Aligns with the Oregon Adult English Language Proficiency Standards, Level 1 and the Oregon Adult College and Career Readiness Standards Reading Foundational Skills. This course introduces the same skills as ESOL-012, but provides fewer hours toward developing mastery. Required: Student Petition.					
	E. LEE		\$520.00	\$52.00	\$20.00						
<b>ENGR-223 ELECTRICAL CIRCUIT ANALYSIS III, 4 CREDITS</b>						REM LCT	<b>ESOL-013-06</b>	<b>343815 TTH</b>		<b>6-7:20 PM</b>	
Final course in the electrical circuits sequence. The main emphases of the course are frequency response of circuits, the design and analysis of filters, Laplace transform analysis, and the Fourier series. The laboratory portion of the course will consist of one project involving significant design and analysis.							L. MYERS		\$0.00	\$0.00	\$30.00
<b>Prerequisites:</b> ENGR-222						Required: Student Petition.					
<b>Corequisites:</b> ENGR-223L						<b>ESOL-015 BEGINNING READING, WRITING, AND GRAMMAR, 0 CREDIT</b>					
<b>Recommended Prerequisite or Corequisite:</b> MTH-256						English language learners are introduced to the basic language necessary to function in day-to-day American society; language functions are taught in the contexts of work, family and community. Aligns with the Oregon Adult English Language Proficiency Standards, Level 1. Variable hours: 48-66 hours. Required: Student Petition.					
oc	<b>ENGR-223-01</b>	<b>344370 TTH</b>			<b>9-10:20 AM</b>						
	M. FARRELL		\$520.00	\$52.00	\$52.00						

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OC NCT	<b>ESOL-015-01 343818 MW</b>		J. RUEDA			\$0.00	\$0.00	<b>9-11:50 AM</b>		\$65.00
	Required: Student Petition.									
HAR NCT	<b>ESOL-015-06 343821 MW</b>		K. STECKMEST			\$0.00	\$0.00	<b>6-8:50 PM</b>		\$65.00
	Required: Student Petition.									
HAR NCT	<b>ESOL-015-07 343824 MW</b>		K. HOLLOWAY			\$0.00	\$0.00	<b>6-8:50 PM</b>		\$65.00
	Required: Student Petition.									

**ESOL-020 UPPER BEGINNING GRAMMAR, 0 CREDIT**

English language learners study and practice basic verb forms (simple present and present progressive), and adverbs of frequency in written and spoken English. Aligns with the Oregon Adult English Language Proficiency Standards, Level 1. Required: Student Petition.

OC NCT	<b>ESOL-020-01 343826 TTH</b>		L. JOYCE			\$0.00	\$0.00	<b>10:30 -11:50 AM</b>		\$35.00
	Required: Student Petition.									
HAR NCT	<b>ESOL-020-06 343830 TTH</b>		K. EMENS-HESSLINK			\$0.00	\$0.00	<b>7:30 -8:50 PM</b>		\$35.00
	Required: Student Petition.									
REM NCT	<b>ESOL-020-07 343832 TTH</b>		Y. EFIMENKO			\$0.00	\$0.00	<b>7:30 -8:50 PM</b>		\$35.00
	Required: Student Petition.									

**ESOL-022 UPPER BEGINNING CONVERSATION, 0 CREDIT**

English language learners study and practice speaking and listening skills in basic, highly-structured tasks in the contexts of community, health, and work. Aligns with the Oregon Adult English Language Proficiency Standards, Levels 1 & 2.

HAR LCT	<b>ESOL-022-06 348077 TTH</b>		K. EMENS-HESSLINK			\$0.00	\$0.00	<b>6-7:20 PM</b>		\$30.00
	Required: Student Petition.									

**ESOL-024 UPPER BEGINNING READING & WRITING, 0 CREDIT**

English language learners read short texts to improve reading skills, write simple, compound, and complex sentences, and write related sentences in paragraph form for the contexts of school, work, family and community. Aligns with the Oregon Adult English Language Proficiency Standards, Level 2. Required: Student Petition.

OC LCT	<b>ESOL-024-01 343837 MW</b>		T. NIKOLOPOULOS			\$0.00	\$0.00	<b>9-11:50 AM</b>		\$60.00
	Required: Student Petition.									
HAR LCT	<b>ESOL-024-06 343839 MW</b>		T. NIKOLOPOULOS			\$0.00	\$0.00	<b>6-8:50 PM</b>		\$60.00
	Required: Student Petition.									

**ESOL-030 INTERMEDIATE GRAMMAR A, 0 CREDIT**

One of a two-part series. English language learners study and practice simple present, present progressive, and future verb forms and modals of ability, and advice. Aligns with the Oregon Adult English Language Proficiency Standards, Level 2. Required: Student Petition.

OC LCT	<b>ESOL-030-01 343841 TTH</b>		J. RUEDA			\$0.00	\$0.00	<b>10:30 -11:50 AM</b>		\$30.00
	Required: Student Petition.									
HAR LCT	<b>ESOL-030-06 343845 TTH</b>		L. NARDONE			\$0.00	\$0.00	<b>7:30 -8:50 PM</b>		\$30.00
	Required: Student Petition.									

**ESOL-031 INTERMEDIATE GRAMMAR B, 0 CREDIT**

Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
	One of a two-part series. English language learners study and practice simple past and present perfect verb forms with time expressions, and comparative and superlative adjectives in written and spoken English. Aligns with the Oregon Adult English Language Proficiency Standards, Level 2. Required: Student Petition.									
HAR LCT	<b>ESOL-031-06 343847 TTH</b>		I. FERGUSON			\$0.00	\$0.00	<b>7:30 -8:50 PM</b>		\$30.00
	Required: Student Petition.									
REM LCT	<b>ESOL-031-07 348357 TTH</b>		A. FRANZONI			\$0.00	\$0.00	<b>7:30 -8:50 PM</b>		\$30.00
	Required: Student Petition.									

**ESOL-032 INTERMEDIATE CONVERSATION 1, 0 CREDIT**

English language learners study and practice speaking and listening skills and strategies in structured tasks to improve fluency in the contexts of school, work, family and community. One of a 2-part series. Aligns with the Oregon Adult English Language Proficiency Standards, Levels 2 and 3. Required: Student Petition.

OC LCT	<b>ESOL-032-01 343849 TTH</b>		S. CAISSE			\$0.00	\$0.00	<b>9-10:20 AM</b>		\$30.00
	Required: Student Petition.									
HAR LCT	<b>ESOL-032-06 343854 TTH</b>		S. CAISSE			\$0.00	\$0.00	<b>6-7:20 PM</b>		\$30.00
	Required: Student Petition.									
REM LCT	<b>ESOL-032-07 343855 TTH</b>		A. FRANZONI			\$0.00	\$0.00	<b>6-7:20 PM</b>		\$30.00
	Required: Student Petition.									

**ESOL-034 INTERMEDIATE READING & WRITING, 0 CREDIT**

English language learners read a variety of texts to improve reading skills, and write paragraphs focused on a single topic developed with logically organized facts and details for the contexts of school, work, family and community. Aligns with the Oregon Adult English Language Proficiency Standards, Levels 2 and 3. Required: Student Petition.

OC LCT	<b>ESOL-034-01 343858 MW</b>		D. VERMILLION			\$0.00	\$0.00	<b>9-11:50 AM</b>		\$60.00
	Required: Student Petition.									
HAR LCT	<b>ESOL-034-06 343861 MW</b>		S. CAISSE			\$0.00	\$0.00	<b>6-8:50 PM</b>		\$60.00
	Required: Student Petition.									

**ESOL-042 UPPER INTERMEDIATE CONVERSATION 1, 0 CREDIT**

English language learners study and practice speaking and listening skills and strategies for independent communication to improve fluency in the contexts of school, work, family and community. One of a 2-part series. Aligns with the Oregon Adult English Language Proficiency Standards, Levels 3 and 4. Required: Student Petition.

OC LCT	<b>ESOL-042-01 343862 TTH</b>		M. SHORTINO			\$0.00	\$0.00	<b>9-10:20 AM</b>		\$30.00
	Required: Student Petition.									
HAR LCT	<b>ESOL-042-06 343865 TTH</b>		L. NARDONE			\$0.00	\$0.00	<b>6-7:20 PM</b>		\$30.00
	Required: Student Petition.									

**ESOL-044 UPPER INTERMEDIATE READING & WRITING, 0 CREDIT**

English language learners read a variety of texts to improve reading skills, and produce basic multi-paragraph texts for the contexts of school, work, family and community. Aligns with the Oregon Adult English Language Proficiency Standards, Levels 3 and 4. Required: Student Petition.

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Instructor	Tuition	Fee	Crs. Fee			
HAR LCT	<b>ESOL-044-06 343873 MW</b>				<b>6-8:50 PM</b>	
	P. MROZEK	\$0.00	\$0.00	\$70.00		\$70.00
	Required: Student Petition.					

**ESOL-046 EDITING FOR BETTER WRITING, 0 CREDIT**

English language learners improve their writing through editing. They also engage in extended reading to provide a context for writing. Aligns with the Oregon Adult English Language Proficiency Standards, Levels 2, 3 and 4. Required: Student Petition.

OC LCT	<b>ESOL-046-01 343874 MW</b>				<b>9-11:50 AM</b>	
	K. LONG	\$0.00	\$0.00	\$60.00		\$60.00
	Required: Student Petition.					
HAR LCT	<b>ESOL-046-06 343878 MW</b>				<b>6-8:50 PM</b>	
	J. STENSETH	\$0.00	\$0.00	\$60.00		\$60.00
	Required: Student Petition.					

**ESOL-052 ADVANCED COMMUNICATION SKILLS 1, 0 CREDIT**

English language learners practice speaking and listening strategies for effective communication in discussions, presentations, lectures, note-taking, and group projects. The course builds vocabulary, critical thinking skills, and an awareness of non-verbal communication. The focus of this course is to prepare students for college success. Aligns with the Oregon Adult English Language Proficiency Standards, Level 4 & 5. Required: Student Petition.

OC LCT	<b>ESOL-052-01 343885 TTH</b>				<b>9-10:20 AM</b>	
	J. RUEDA	\$0.00	\$0.00	\$30.00		\$30.00
	Required: Student Petition.					
HAR LCT	<b>ESOL-052-06 343888 TTH</b>				<b>6-7:20 PM</b>	
	I. FERGUSON	\$0.00	\$0.00	\$30.00		\$30.00
	Required: Student Petition.					

**ESOL-054 ADVANCED READING & WRITING, 0 CREDIT**

English language learners develop writing skills including summarizing, response writing, and paraphrasing, and improve writing fluency. Develop reading skills and fluency through reading a range of texts on a variety of topics. Aligns with the Oregon Adult English Language Proficiency Standards, Levels 4 and 5. Required: Student Petition.

OC NCT	<b>ESOL-054-01 343889 MW</b>				<b>9-11:50 AM</b>	
	L. JOYCE	\$0.00	\$0.00	\$70.00		\$70.00
	Required: Student Petition.					
HAR NCT	<b>ESOL-054-06 343893 MW</b>				<b>6-8:50 PM</b>	
	I. FERGUSON	\$0.00	\$0.00	\$70.00		\$70.00
	Required: Student Petition.					

**ESOL-055 ADVANCED GRAMMAR C, 0 CREDIT**

One of a three-part series. English language learners study and practice gerunds, infinitives, and complex sentences with adjective clauses in written and spoken English. Aligns with the Oregon Adult English Language Proficiency Standards, Levels 3 and 4. Required: Student Petition.

OC LCT	<b>ESOL-055-01 348078 TTH</b>				<b>10:30 -11:50 AM</b>	
	K. LONG	\$0.00	\$0.00	\$30.00		\$30.00
	Required: Student Petition.					
HAR LCT	<b>ESOL-055-06 348076 TTH</b>				<b>7:30 -8:50 PM</b>	
	K. LONG	\$0.00	\$0.00	\$30.00		\$30.00
	Required: Student Petition.					

**ESOL-069 PRONUNCIATION: PATTERNS OF AMERICAN ENGLISH, 0 CREDIT**

Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Time	Total
Instructor	Tuition	Fee	Crs. Fee			
English language learners develop pronunciation skills and knowledge to improve speech clarity, listening effectiveness, and pronunciation of written words. This course focuses on the speech patterns of American English. Required: Student Petition.						
OC LCT	<b>ESOL-069-01 343898 MW</b>				<b>12:30 -1:50 PM</b>	
	K. LONG	\$0.00	\$0.00	\$30.00		\$30.00
	Required: Student Petition.					

**ESOL-082 ASSESS/EVALUATE NEW STUDENTS, 0 CREDIT**

New students in the ESOL program receive information about classes offered, departmental and college policies, college services available, campus facilities, accessing student portal and email, student responsibilities, and community resources. Students are tested to determine their language levels and class placement. Students select courses with a faculty advisor. This course is used administratively to identify new students in the ESOL department. Required: Student Petition.

ONL NCT	<b>ESOL-082-01 343901</b>					
	L. JOYCE	\$0.00	\$0.00	\$0.00		\$0.00
	Required: Student Petition.					
ONL NCT	<b>ESOL-082-06 343902</b>					
	L. JOYCE	\$0.00	\$0.00	\$0.00		\$0.00
	Required: Student Petition.					

**ESOL-083 EDUCATIONAL PLANNING FOR RETURNING STUDENTS, 0 CREDIT**

Designed for returning students in the ESOL program at CCC. Students meet with faculty advisors to review their progress, revisit their goals, choose next term's classes, and learn how to transition to other educational and training opportunities at the college and in other community programs. This course is used administratively to identify returning students in the ESOL department. Required: Student Petition.

ONL NCT	<b>ESOL-083-01 343903</b>					
	L. JOYCE	\$0.00	\$0.00	\$0.00		\$0.00
	Required: Student Petition.					
ONL NCT	<b>ESOL-083-06 343905</b>					
	L. JOYCE	\$0.00	\$0.00	\$0.00		\$0.00
	Required: Student Petition.					

**English Literature****ENG-106Z INTRODUCTION TO POETRY, 4 CREDITS**

The study of poetry invites us to delve into the biggest questions about life and culture alongside the seemingly smallest issues of words and sounds. ENG-106Z provides opportunities for the appreciation of poetry, including deeper awareness of craft and insight into how reading poetry can lead to self-enrichment. Students read a variety of types of poetry and poetic forms, from diverse perspectives and eras, and develop their skills in discussion, literary analysis, and critical thinking.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

ONL LCT	<b>ENG-106Z-01 344339</b>					
	A. COFFEY	\$520.00	\$52.00	\$0.00		\$572.00

**ENG-109 WORLD LITERATURE: THE 19TH THROUGH 21ST CENTURIES, 4 CREDITS**

Literature of the 19th through 21st centuries, in a variety of genres. Through class discussion, research, and written work, students practice close reading and literary interpretation, explore the readings' contemporary relevance, relate the readings to their own lives and the world, and engage in academic conversations about the literature.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

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ONL	<b>ENG-109-01 344342</b> A. WARREN					\$520.00	\$52.00	\$0.00		\$572.00
<b>ENG-195 AMERICAN FILM, 4 CREDITS</b>										
This course will focus on the history and theory of American filmmaking from 1895 to the present. Film will be viewed as a visual language and an evolving art form that expresses and influences American culture.										
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z										
OC NCT	<b>ENG-195-01 344344 TTH</b> R. DAVIS					\$520.00	\$52.00	\$0.00	1-2:50 PM	\$572.00
<b>ENG-213 U.S. LATINX LITERATURE, 4 CREDITS</b>										
This course offers a survey of U.S. Latinx literature of various genres and historical periods. Students read and study the literary contributions by writers of varied cultural heritage and will bring theory and literature into conversation about issues in the world, including power, privilege, and cultural perspectives between Latinx populations and the U.S. cultural sphere.										
<b>Prerequisites:</b> WRD-098 or placement in WR-121Z										
OC	<b>ENG-213-01 347984 MW</b> A. ENCINAS					\$520.00	\$52.00	\$0.00	10-11:50 AM	\$572.00
<b>ENG-222 CHILDREN'S AND YOUNG ADULT LITERATURE, 4 CREDITS</b>										
Surveys the development of the genres of children's and young adult literature, including fairy tales, picture books, classic children's novels, and contemporary young adult novels, studying how these texts reflect their culture's understanding of young readers' psychology, taste, and learning needs over time.										
<b>Recommended Prerequisites:</b> Placement in WRD-098 or above										
OC NCT	<b>ENG-222-01 345547 MW</b> T. DONNELLY					\$520.00	\$52.00	\$0.00	10-11:50 AM	\$572.00
<b>ENG-254 AMERICAN LITERATURE: 1865 TO PRESENT, 4 CREDITS</b>										
Representative readings from the 1865 to present day. Surveys the development of American fiction, nonfiction, poetry, and drama through the study of the works of both major and lesser known writers.										
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z										
ONL	<b>ENG-254-01 345548</b> J. MCALPINE					\$520.00	\$52.00	\$0.00		\$572.00
<b>ENG-261 LITERATURE OF SCIENCE FICTION, 4 CREDITS</b>										
Explores historical, cultural, social, and literary significance of science fiction literature; places science fiction into the larger context of World literature and literary tradition. Considers how science fiction is often a lens to examine cultural themes such as gender, sexuality, race, and other ways that humans focus on difference; introduces theoretical approaches and basic literary elements and terminology.										
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z										
OC	<b>ENG-261-01 344349 TTH</b> C. BURNELL					\$520.00	\$52.00	\$0.00	10-11:50 AM	\$572.00
<b>ENG-273 WORLD LITERATURE: THE 19TH THROUGH 21ST CENTURIES, 4 CREDITS</b>										
Literature of the 19th through 21st centuries, in a variety of genres. Through class discussion, research, and written work, students practice close reading and literary interpretation, explore the readings' contemporary relevance, relate the readings to their own lives and the world, and engage in academic conversations about the literature.										
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z										
ONL	<b>ENG-273-01 345546</b> A. WARREN					\$520.00	\$52.00	\$0.00		\$572.00
<b>ENG-297 A.S. DEGREE PORTFOLIO, 1 CREDIT</b>										
This course provides the opportunity for A.S. Degree students to revise, edit, reflect upon, and compile their best work from their various focus areas to meet the outcomes for the program and prepare for transfer to a university.										
<b>Required:</b> Students must be in the second year of their course of study, and have the majority of their focus area and transfer requirements complete										
ONL NCT	<b>ENG-297-01 344357</b> N. ROSEVEAR					\$130.00	\$13.00	\$0.00		\$143.00

## Environmental Science

### ESR-173 INTRODUCTION TO SUSTAINABILITY, 4 CREDITS

Introduction to environmental, ecological and human sustainability. Focus on human impacts on environmental degradation and methods to approach sustainability and environmental justice. The laboratory assignments will focus on applied introductory sustainability topics.

**Corequisites:** ESR-173L

**Recommended Prerequisites:** MTH-060 or MTH-098 with a C or better, or placement in MTH-065

**Recommended Prerequisites:** WRD-098

OC	<b>ESR-173-01 344374 TTH</b> E. CAVALIERE					\$520.00	\$52.00	\$55.00	1-2:20 PM	\$627.00
Corequisite: Take 1 of the following ESR-173L-01, ESR-173L-02, ESR-173L-03, ESR-173L-04.										
ONL	<b>ESR-173-02 344377</b> E. CAVALIERE					\$520.00	\$52.00	\$55.00		\$627.00
This section has an in-person lab requirement. Corequisite: Take 1 of the following ESR-173L-01, ESR-173L-02, ESR-173L-03, ESR-173L-04.										
ONL	<b>ESR-173-03 348019</b> E. CAVALIERE					\$520.00	\$52.00	\$55.00		\$627.00
This section has an in-person lab requirement. Corequisite: Take 1 of the following ESR-173L-01, ESR-173L-02, ESR-173L-03, ESR-173L-04.										
ONL	<b>ESR-173-15 344378</b> S. BALLEW					\$520.00	\$52.00	\$55.00		\$627.00
Corequisite: Take the following ESR-173L-15.										

### ESR-173L INTRODUCTION TO SUSTAINABILITY LAB, 0 CREDIT

Lab course for ESR-173

**Corequisites:** ESR-173

OC	<b>ESR-173L-01 344379 T</b> E. CAVALIERE					\$0.00	\$0.00	\$0.00	9-11:50 AM	\$0.00
Corequisite: Take 1 of the following ESR-173-01, ESR-173-02, ESR-173-03.										
OC	<b>ESR-173L-02 344380 W</b> D. HUFFORD					\$0.00	\$0.00	\$0.00	9-11:50 AM	\$0.00
Corequisite: Take 1 of the following ESR-173-01, ESR-173-02, ESR-173-03.										
OC	<b>ESR-173L-03 344382 W</b> E. CAVALIERE					\$0.00	\$0.00	\$0.00	1-3:50 PM	\$0.00
Corequisite: Take 1 of the following ESR-173-01, ESR-173-02, ESR-173-03.										

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**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

**Other Coding Translations:**  
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**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

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OC	<b>ESR-173L-04 348020 TH</b> E. CAVALIERE Corequisite: Take 1 of the following ESR-173-01, ESR-173-02, ESR-173-03.					\$0.00	\$0.00	2:30 -5:20 PM	\$0.00	\$0.00
HAR	<b>ESR-173L-15 344383 TH</b> S. BALLEW Corequisite: Take the following ESR-173-15.					\$0.00	\$0.00	6-8:50 PM	\$0.00	\$0.00

## Ethnic Studies

### ES-241 INTRODUCTION TO NATIVE AMERICAN STUDIES, 4 CREDITS

An introductory, interdisciplinary analysis of issues impacting Indigenous lives and identities of North America, deconstructing myths and addressing historical and contemporary key issues in the field of Native American Studies from the counter-narrative perspective.

**Prerequisites:** WRD-098 or placement into WR-121Z

ONL	<b>ES-241-01 344359</b> TBA					\$520.00	\$52.00	\$0.00	\$572.00
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## Family Studies

### HDF-140 CONTEMPORARY AMERICAN FAMILIES, 3 CREDITS

This course focuses on the diversity of the American family today and a historical overview of changes in the family environment and structure. Topics will include internal/external factors that influence families such as parenting, culture, gender, divorce, remarriage, economics, and culture. Course has a focus on issues of equity, diversity, and inclusion.

OC HYB LCT	<b>HDF-140-01 344445 W</b> TBA Meets: 4/2, 4/16, 4/30, 5/14, 5/28.					\$390.00	\$39.00	\$0.00	\$429.00
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### HDF-247 PRESCHOOL THROUGH ADOLESCENT CHILD DEVELOPMENT, 3 CREDITS

This course focuses on principles of development in children three years old through adolescence, including physical, cognitive, language, and social and emotional growth. Explores major historical theories of child development and current research and practices. A focus on how culture, family dynamics, and socio-economic status impact growth and development are included.

**Prerequisites:** HDF-225

ONL	<b>HDF-247-01 344449</b> S. MYERS This is an accelerated five-week online course which meets: 5/5 - 6/13.					\$390.00	\$39.00	\$0.00	\$429.00
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### HDF-247ES DESARROLLO Y CRECIMIENTO EN LA NIÑEZ: PREESCOLAR HASTA LA ADOLESCENCIA, 4 CREDITS

Este curso se enfoca en los principios del desarrollo en niños de tres años hasta la adolescencia, incluyendo el crecimiento, y la evolución física, cognitiva, social y emocional. Explora las principales teorías históricas del desarrollo infantil y las investigaciones y prácticas actuales. Se incluye un enfoque en cómo la cultura, la dinámica familiar y el estatus socioeconómico impactan el crecimiento y el desarrollo de los niños.

**Prerequisites:** ECE-150ES, FYE-101ES, and HDF-225ES

REM ESPAÑOL	<b>HDF-247ES-01 344452 M</b> D. TORRADO La clase se reúne cinco lunes por Zoom (4/7, 4/21, 5/5, 5/19, 6/12) de 6:00PM a 7:50PM.					\$520.00	\$52.00	\$0.00	\$572.00
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### HDF-260 UNDERSTANDING CHILD ABUSE AND NEGLECT, 3 CREDITS

In this course, students will receive an overview of child abuse and neglect. Students will examine the types and causes of abuse, abused children, abusive parents, treatment, education and prevention, and resources available to assist children and families. An emphasis is placed on intervention and mandatory reporting, as well as risks and outcomes. This course discusses the investigation process of child welfare and forensic interviewing of abused children. Students will also learn about the signs and symptoms of abuse and how trauma impacts an individual's health across a lifetime.

ONL	<b>HDF-260-01 344458</b> C. BAKER					\$390.00	\$39.00	\$0.00	\$429.00
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## Fire Science (Wildland)

### FRP-112 INTRODUCTION TO CHAINSAW OPERATIONS, 3 CREDITS

The course lessons provide introduction to the function, maintenance and use of internal combustion engine powered chainsaws, and their tactical wildland fire application. Field exercises support entry level training for firefighters with little or no previous experience in operating a chainsaw, providing hands-on cutting experience in surroundings similar to fireline situations. Required: Student Petition.

**Prerequisites:** FRP-130 (S-130/S-190/L-180), FRP-249 (L-280), FRP-250, and FRP-255

**Required:** Students must be at least 18 years of age. Must have current first aid, CPR and AED certification

OC	<b>FRP-112-01 348353 MT</b> J. GULLEY Meets: 5/4-5/12.					\$390.00	\$39.00	\$0.00	\$429.00
OC	<b>FRP-112-02 348354 THF</b> J. GULLEY Meets: 5/7-5/15.					\$390.00	\$39.00	\$0.00	\$429.00

### FRP-131 ADVANCED FIREFIGHTER TRAINING (S-131/S-133), 1 CREDIT

This course provides instruction that meets the training requirements for the Wildland Firefighter Type 1 position and/or Incident Commander Type 5 (ICT5).

**Prerequisites:** FRP-130 (S-130/S-190/L-180)

OC	<b>FRP-131-01 348350 T M</b> J. GULLEY Meets: 4/13-4/14.					\$130.00	\$13.00	\$20.00	\$163.00
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### FRP-200 BASIC INCIDENT COMMAND SYSTEM (I-100, I-200, IS-700, IS-800), 4 CREDITS

Introduces the knowledge and skills to function efficiently during an incident or event within the Incident Command System (ICS). National Incident Management System (NIMS) and the National Response Framework (NRF) provide a consistent nationwide template to enable all government, private-sector, and nongovernmental organizations to work together during domestic incidents.

OC HYB	<b>FRP-200-01 344052 W</b> J. GULLEY					\$520.00	\$52.00	\$0.00	\$572.00
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### FRP-201 ADVANCED FOREST MANAGEMENT, 3 CREDITS

## Course Listing

2026/SP

Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

Discuss and explore forest management concepts and principles through classroom lecture and field trips. Contrast forest management decisions made dependent on public or private landowner objections, economics and federal and state laws that provide for protection of soil, water, air, fish, and wildlife and consideration of recreation values.

**Prerequisites:** FRP-101 and FRP-102

oc	<b>FRP-201-01</b>	<b>348084 W</b>			<b>10-12:50 PM</b>	
	G. CLINE		\$390.00	\$39.00	\$0.00	\$429.00

### FRP-211 PORTABLE PUMPS AND WATER USE (S-211), 2 CREDITS

This course is designed to provide knowledge and skills to design, setup, operate, troubleshoot, and shut down portable water delivery systems. The focus is on portable pumps; it does not address water delivery for engines. There is also a field exercise where students will apply what they learned in the classroom.

**Prerequisites:** FRP-130 (S-130/S-190/L-180)

oc	<b>FRP-211-01</b>	<b>344054 T</b>			<b>10-6:00 PM</b>	
		<b>M</b>			<b>8-6:00 PM</b>	
	J. GULLEY		\$260.00	\$26.00	\$50.00	\$336.00
	Meets: 4/27-4/28.					

### FRP-249 FOLLOWERSHIP TO LEADERSHIP (L-280), 2 CREDITS

The course prepares the student for a basic field operations leadership role. Students will be able demonstrate basic leadership skills through interactive classroom discussions and scenario based exercises.

oc	<b>FRP-249-01</b>	<b>344062 MT</b>			<b>8-5:00 PM</b>	
	J. GULLEY		\$260.00	\$26.00	\$30.00	\$316.00
	Meets: 3/30-3/31.					

### FRP-255 PHYSICAL FITNESS AND NUTRITION FOR FIRST RESPONDERS, 2 CREDITS

This course will assist the student in meeting the physical fitness requirements for work in firefighting, and emergency medical services. Includes individual conditioning strategies, nutritional guidelines, basic exercise principles, pre-employment and lifelong fitness and conditioning. The course will prepare students for activities like the Candidate Physical Abilities Test (CPAT), work capacity test and other physical ability tests required for first responders. May be repeated for up to 6 credits.

**Required:** Complete a physical performed by a licensed physician prior to attending

**Recommended:** Have adequate outdoor exercise attire and be prepared for arduous physical activity

oc	<b>FRP-255-01</b>	<b>344065 TW</b>			<b>10-11:50 AM</b>	
	J. GULLEY		\$260.00	\$26.00	\$0.00	\$286.00

### FRP-265 WILDLAND FIRE PREVENTION EDUCATION 1 (P-101), 3 CREDITS

This course was developed as part of a multi-course national curriculum covering wildfire prevention. It is designed to provide a basic introduction of fire prevention principles and activities for fire prevention specialists, fire managers, public information officers and others who have wildland fire prevention, education, or mitigation responsibilities. Course equivalent to NWCG P-101 Fire Prevention Education 1.

**Prerequisites:** FRP-130 (S-130/S-190/L-180)

oc	<b>FRP-265-01</b>	<b>348352 THF</b>			<b>8-5:00 PM</b>	
	J. GULLEY		\$390.00	\$39.00	\$0.00	\$429.00
	Meets: 4/2-4/10.					

### FRP-270 BASIC AIR OPERATIONS (S-270), 1 CREDIT

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**LCT:** Low-Cost Text  
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Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

The course introduces students to basic air operations including the different types of aircraft used in wildland firefighting operations along with mission planning, risk management, safety, and communications.

oc	<b>FRP-270-01</b>	<b>344066 W</b>			<b>8:20 -9:50 AM</b>	
	J. GULLEY		\$130.00	\$13.00	\$30.00	\$173.00

## First Year Experience (FYE)

### FYE-101 FIRST YEAR EXPERIENCE LEVEL I, 2 CREDITS

This is the first course in a 3-course sequence designed to help students adjust to a new campus, connect with other students, understand college expectations and systems, and access services available through the college. The First Year Experience Level I course is designed to help students in developing relationships with students and faculty, and to build student behaviors for successfully completing classes and continuing college through to completion.

oc	<b>FYE-101-01</b>	<b>344362 MW</b>			<b>9-9:50 AM</b>	
	D. GREEN		\$260.00	\$26.00	\$12.00	\$298.00
oc	<b>FYE-101-02</b>	<b>345516 T</b>			<b>10-11:50 AM</b>	
	T. BOYLE- GALESTIANZ		\$260.00	\$26.00	\$12.00	\$298.00
ONL	<b>FYE-101-03</b>	<b>344366</b>				
	L. MARTINEZ		\$260.00	\$26.00	\$12.00	\$298.00

### FYE-101ES EXPERIENCIA DE PRIMER AÑO (FIRST YEAR EXPERIENCE EN ESPAÑOL), 2 CREDITS

Este es el primer curso en la serie de 3 clases diseñadas para ayudar a los estudiantes novatos o que inician apenas su trayectoria estudiantil, con el ajuste a un plantel nuevo, a conectar con otros alumnos, a entender las expectativas del sistema estudiantil, y a familiarizarse con la fuente de servicios al alcance del estudiante. First Year Experience (Experiencia de Primer Año) está diseñada para preparar a los estudiantes a entablar nexos entre estudiante y profesorado, y con el desarrollo de prácticas exitosas para concluir clases y continuar con el estudio hasta la culminación de metas académicas.

REM LCT ESPAÑOL	<b>FYE-101ES-01</b>	<b>344369 T</b>			<b>6-7:50 PM</b>	
	L. MARTINEZ		\$260.00	\$26.00	\$12.00	\$298.00

### FYE-103 FIRST YEAR EXPERIENCE LEVEL III, 1 CREDIT

This is the third course in the First Year Experience sequence. This course is designed to help students prepare for their future, including transferring to another school or university, how to search for employment, becoming proficient in the use of test taking skills, and how to break large projects and assignments into more manageable pieces for successful completion.

**Prerequisites:** FYE-102

ONL	<b>FYE-103-01</b>	<b>345517</b>				
	D. GREEN		\$130.00	\$13.00	\$12.00	\$155.00

## Food & Nutrition

### FN-110 PERSONAL NUTRITION, 3 CREDITS

This course explores how nutrition affects health and fitness for the individual and the family. Students apply knowledge of nutrition guidelines to analyze personal diet and improve current food preparation and habits. It is a basic nutrition course for students with little or no science background.

ONL	<b>FN-110-01</b>	<b>343647</b>				
	T. SCOLLARD		\$390.00	\$39.00	\$0.00	\$429.00



Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total
	Instructor		Tuition	Fee	Crs. Fee	
<b>FN-225</b>	<b>NUTRITION, 4 CREDITS</b>					
This course explores the role of nutrients in the development and maintenance of a healthy body. The course examines the relationship between diet and health. Students apply knowledge of nutritional adequacy through computer-aided diet analysis. It discusses current nutrition recommendations and controversies. The course meets requirements for most nursing programs.						
<b>Recommended:</b> A strong background in anatomy and physiology, biology or chemistry						
ONL	<b>FN-225-01</b>	<b>343648</b>				
	T. SCOLLARD		\$520.00	\$52.00	\$0.00	\$572.00
ONL	<b>FN-225-02</b>	<b>343649</b>				
	J. PAVLINAC		\$520.00	\$52.00	\$0.00	\$572.00
ONL	<b>FN-225-03</b>	<b>348018</b>				
	J. PAVLINAC		\$520.00	\$52.00	\$0.00	\$572.00

## General Development Education (GED)

*GED Classes offered Days and Evenings*

*Students will be placed in the appropriate class based on their schedules and intake assessments. Please call 503-594-3028 for orientation information.*

### GED-011 GED IN ESPAÑOL, 0 CREDIT

Instrucción del desarrollo de habilidades básicas ofrecida en español. Un examen de diagnóstico determina las necesidades académicas del alumno. Inscripción y terminación del curso todo el tiempo durante el trimestre, se ofrece en Harmony center y Oregon City campus. Se requiere el consentimiento del Instructor para registrarse. Basic academic instruction offered in Spanish. Diagnostic tests determine individual academic needs. Open-entry, open-exit class offered at Harmony center and Oregon City campus. Required: Student Petition.

REM LCT ESPAÑOL	<b>GED-011-01</b>	<b>344371 MW</b>	<b>5:30 -7:50 PM</b>			
	A. ARISTIZABAL		\$0.00	\$0.00	\$50.00	\$50.00
	Requerido: petición del estudiante. For registration information contact Adriana Aristizabal at 503-594-3916 or register at first class.					
HAR LCT ESPAÑOL	<b>GED-011-02</b>	<b>344375 TTH</b>	<b>6-8:50 PM</b>			
	C. SANCHEZ		\$0.00	\$0.00	\$50.00	\$50.00
	Requerido: petición del estudiante.					

### GED-015 GED PREPARATION, 0 CREDIT

Basic academic skill development preparing for the GED 2014 tests and transition to career or post-secondary education. Course focuses primarily on language arts, math and technology skills. Provides direction and support for transitioning students. Required: Student Petition.

HAR HYB LCT	<b>GED-015-67</b>	<b>344384 MW</b>			<b>10-11:50 AM</b>	
	L. NIELSON		\$0.00	\$0.00	\$55.00	\$55.00
	Required: Student Petition.					
ONL LCT	<b>GED-015-68</b>	<b>344387</b>				
	S. HATSWELL		\$0.00	\$0.00	\$55.00	\$55.00
	Required: Student Petition.					
ONL LCT	<b>GED-015-69</b>	<b>344389</b>				
	L. NIELSON		\$0.00	\$0.00	\$55.00	\$55.00
	Required: Student Petition.					

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	Instructor		Tuition	Fee	Crs. Fee	
OC LCT	<b>GED-015-80</b>	<b>344391 MTWTH</b>			<b>10-11:50 AM</b>	
	J. NIELSON		\$0.00	\$0.00	\$55.00	\$55.00
	Required: Student Petition.					
<b>GED-049</b>	<b>LATINO GED &amp; LIFE SKILLS, 0 CREDIT</b>					
Desarrollo de habilidades académicas básicas, ofrecida en español con énfasis en los requerimientos para presentar el test del GED para obtener el certificado equivalente a la High School. También se enfoca en habilidades básicas de la vida, metas personales e interés de carreras. Se requiere el consentimiento del Instructor para registrarse. Offered in Spanish. Basic academic skill development with emphasis on requirements to take the GED test to obtain a high school equivalency certificate. Also focuses on basic life skills, personal and career goals and interests. Required: Student Petition.						
REM LCT ESPAÑOL	<b>GED-049-02</b>	<b>344393 TTH</b>			<b>6-8:50 PM</b>	
	A. ARISTIZABAL		\$0.00	\$0.00	\$50.00	\$50.00
	Requerido: petición del estudiante.					
HAR LCT ESPAÑOL	<b>GED-049-03</b>	<b>344400 MW</b>			<b>9-11:50 AM</b>	
	C. SANCHEZ		\$0.00	\$0.00	\$50.00	\$50.00
	Requerido: petición del estudiante. For registration information contact Camilo Sanchez at 503-594-3029 or register at first class.					
HAR LCT ESPAÑOL	<b>GED-049-04</b>	<b>344403 S</b>			<b>9-11:50 AM</b>	
	M. ROSAS DELGADO		\$0.00	\$0.00	\$30.00	\$30.00
	Requerido: petición del estudiante.					
HAR LCT ESPAÑOL	<b>GED-049-04NF</b>	<b>344404 S</b>			<b>9-11:50 AM</b>	
	M. ROSAS DELGADO		\$0.00	\$0.00	\$0.00	\$0.00
	Requerido: petición del estudiante.					

## General Science

### GS-107 ASTRONOMY, 4 CREDITS

A lab course including the history of astronomy, the Earth and moon, all planets in our solar system, along with asteroids, meteors and comets.

**Corequisites:** GS-107L

**Prerequisites:** MTH-065 or MTH-098 with a C or better or placement in MTH-095

**Prerequisites:** WRD-090 or placement in WRD-098

ONL	<b>GS-107-40</b>	<b>344402</b>				
	C. SHARON		\$520.00	\$52.00	\$25.00	\$597.00

### GS-107L ASTRONOMY LAB, 0 CREDIT

Lab course for GS-107

**Corequisites:** GS-107

ONL	<b>GS-107L-40</b>	<b>344406</b>				
	C. SHARON		\$0.00	\$0.00	\$0.00	\$0.00

## Geographic Information Systems

*All degree seeking students should arrange to speak to a faculty advisor prior to registering. Call 503-594-3678 for more information, or contact Advising, 503-594-3475.*

### GIS-101 MAPS AND GEOSPATIAL TECHNOLOGY, 4 CREDITS

Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

This course provides an overview of the concepts and principles of geospatial technology using lab activities to explore maps, geospatial data, and geospatial software. Major themes include maps and cartography, geographic information systems, spatial data, global navigation satellite systems, remote sensing, terrain analysis, web maps, and the geospatial industry.

OC HYB LCT	<b>GIS-101-01</b>	<b>344070 W</b>			<b>10-11:50 AM</b>	
	A. ARMEN		\$520.00	\$52.00	\$30.00	\$602.00

### GIS-232 DATA COLLECTION & APPLICATION, 4 CREDITS

This course introduces data collection techniques and application of those techniques. This course explores different techniques to collect spatial and attribute data. The class focuses on GPS (Global Positioning System) data collection using a combination of recreational/mapping-grade GPS units and standard mobile devices (with embedded GPS) used in industry. The class will emphasize the capabilities and strengths of each type of data collection equipment.

ONL	<b>GIS-232-01</b>	<b>344071</b>				
	L. COX		\$520.00	\$52.00	\$30.00	\$602.00

### GIS-270 GIS CAPSTONE, 4 CREDITS

The Geographic Information Systems (GIS) Capstone course is the culmination of the Geographic Information Systems Technology (GIS) Certificate. Working with the instructor, students begin the course by researching and proposing a project. After developing a project plan and working through the analysis necessary, students will present their findings in an oral and written presentation. Additionally, scenario-based assignments will reinforce the project-based analysis process. Throughout the course, portfolio building strategies are explored with an emphasis on developing a professional portfolio demonstrating their work as preparation for entering the GIS profession.

ONL	<b>GIS-270-01</b>	<b>347993</b>				
	A. ARMEN		\$520.00	\$52.00	\$10.00	\$582.00
	L. COX					

## Geography

### GEO-100 INTRODUCTION TO PHYSICAL GEOGRAPHY, 4 CREDITS

Analyzes the physical elements of the Earth's surface and atmosphere. Focuses on natural processes that create physical diversity on the Earth including weather and climate, biosphere, soils and landforms and explores how these influence human cultural settlement activities.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

ONL	<b>GEO-100-01</b>	<b>345533</b>				
	C. FELDMAN		\$520.00	\$52.00	\$0.00	\$572.00

### GEO-110 CULTURAL & HUMAN GEOGRAPHY, 4 CREDITS

Introduces geographical perspectives on human population, agriculture, political pattern, language, religion, folk culture, popular culture, ethnic culture, urban development, industry, and transportation as these play out on the diverse landscapes of the world.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

ONL NCT	<b>GEO-110-01</b>	<b>344405</b>				
	C. FELDMAN		\$520.00	\$52.00	\$0.00	\$572.00

### GEO-130 INTRODUCTION TO ENVIRONMENTAL GEOGRAPHY, 4 CREDITS

**Campus Locations:**  
**HAR:** Harmony Community Campus  
**OC:** Oregon City Campus  
**WILS:** Wilsonville Training Center  
**OFF:** Other Off-Campus Location

**Distance Education Notification:**  
**ONL:** Online Only  
**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

**Other Coding Translations:**  
**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

Explores the contemporary global environmental problems such as: overpopulation, over consumption, ozone layer depletion, pollution, acid rain, deforestation, desertification, and waste problems. Examines alternative sources of energy to fossil fuel and sustainable development strategies.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

ONL	<b>GEO-130-01</b>	<b>344407</b>				
	A. ARMEN		\$520.00	\$52.00	\$0.00	\$572.00

### GEO-280 GEOGRAPHY/CWE, 2-6 CREDITS (VAR)

Cooperative work experience. Provides students with on-the-job work experience in the field of geography. Required: Student Petition.

**Corequisites:** CWE-281

OC NCT	<b>GEO-280-01</b>	<b>344412</b>				
	C. FELDMAN		\$780.00	\$78.00	\$45.00	\$903.00V
	D. LOUGEE					
	Required: Student Petition. Corequisite: Take the following CWE-281-06.					

## Geology

### G-103 GENERAL GEOLOGY, 4 CREDITS

For non-science majors. A lab course that examines the geological development of the North American continent through topics such as geologic time, plate tectonics, mountain building earthquakes/faults, and fossils. Examines important events in each geologic era and includes fossil ID, compass use, field techniques and GPS.

**Corequisites:** G-103L

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

OC HYB LCT	<b>G-103-01</b>	<b>344385 MW</b>			<b>3-4:20 PM</b>	
	R. COLLINS		\$520.00	\$52.00	\$50.00	\$622.00
	Corequisite: Take the following G-103L-01.					
OC	<b>G-103-02</b>	<b>344386 TTH</b>			<b>10-11:20 AM</b>	
	A. KOTASH		\$520.00	\$52.00	\$50.00	\$622.00
	Corequisite: Take the following G-103L-02.					
REM LCT	<b>G-103-20</b>	<b>344388 T</b>			<b>6-8:50 PM</b>	
	J. WOODCOCK		\$520.00	\$52.00	\$50.00	\$622.00
	Corequisite: Take the following G-103L-20.					

### G-103L GENERAL GEOLOGY LAB, 0 CREDIT

Lab course for G-103

**Corequisites:** G-103

OC LCT	<b>G-103L-01</b>	<b>344390 TH</b>			<b>1-3:50 PM</b>	
	R. COLLINS		\$0.00	\$0.00	\$0.00	\$0.00
	Corequisite: Take the following G-103-01.					
OC LCT	<b>G-103L-02</b>	<b>344392 T</b>			<b>1-3:50 PM</b>	
	A. KOTASH		\$0.00	\$0.00	\$0.00	\$0.00
	Corequisite: Take the following G-103-02.					
HAR LCT	<b>G-103L-20</b>	<b>344394 TH</b>			<b>6-8:50 PM</b>	
	J. WOODCOCK		\$0.00	\$0.00	\$0.00	\$0.00
	Corequisite: Take the following G-103-20.					

### G-203 GENERAL GEOLOGY, 4 CREDITS

For science majors. A lab course that examines the geological development of the North American continent through topics such as geologic time, plate tectonics, mountain building earthquakes/faults, and fossils. Examines important events in each geologic era and includes fossil ID, compass use, field techniques and GPS.

Course No Course Title, Credits							Course No Course Title, Credits						
	Section No Instructor	Crs Reg.	Days (M,T,W,TH,F,S,SU) Tuition	Fee	Time Crs. Fee	Total		Section No Instructor	Crs Reg.	Days (M,T,W,TH,F,S,SU) Tuition	Fee	Time Crs. Fee	Total
<b>Prerequisites:</b> G-202 with a C or better							Examination of nutrition as it relates to the demands of exercise and competitive sport. Emphasis on the relationship of diet and exercise to optimal health and performance. This course can lead to a certification as a sports nutritionist through the NCSF.						
<b>Corequisites:</b> G-203L													
<b>Recommended Prerequisites:</b> MTH-065 or placement in MTH-080 or MTH-095													
OC HYB LCT	<b>G-203-01</b>	<b>344395 MW</b>			<b>3-4:20 PM</b>		ONL	<b>HE-223-01</b>	<b>344420</b>				
	R. COLLINS	\$520.00	\$52.00	\$50.00	\$622.00	J. BUEL		\$390.00	\$39.00	\$0.00	\$429.00		
	Corequisite: Take the following G-203L-01.												
OC	<b>G-203-02</b>	<b>344396 TTH</b>			<b>10-11:20 AM</b>		<b>HE-249</b>	<b>MENTAL HEALTH, 3 CREDITS</b>					
	A. KOTASH	\$520.00	\$52.00	\$50.00	\$622.00	Designed for each student to understand and improve their personal mental health. Teaches theories of mental health as well as practical strategies for improving one's level of mental health. Analyzes factors that may impede optimal mental health, again with practical solutions for minimizing/avoiding such factors.							
	Corequisite: Take the following G-203L-02.												
REM LCT	<b>G-203-20</b>	<b>344397 T</b>			<b>6-8:50 PM</b>		REM NCT	<b>HE-249-01</b>	<b>344422 MW</b>			<b>1-2:20 PM</b>	
	J. WOODCOCK	\$520.00	\$52.00	\$50.00	\$622.00	K. WOODS		\$390.00	\$39.00	\$0.00	\$429.00		
	Corequisite: Take the following G-203L-20.												
<b>G-203L GENERAL GEOLOGY LAB, 0 CREDIT</b>							<b>HE-250 PERSONAL HEALTH, 3 CREDITS</b>						
Lab course for G-203							This course is designed to help students gain an overall understanding of information basic to the field of health, to help them critically evaluate health information, and to promote positive attitudes, values, and behaviors in regard to personal health.						
<b>Corequisites:</b> G-203													
OC LCT	<b>G-203L-01</b>	<b>344398 TH</b>			<b>1-3:50 PM</b>		ONL	<b>HE-250-02</b>	<b>344426</b>				
	R. COLLINS	\$0.00	\$0.00	\$0.00	\$0.00	J. RHODEN		\$390.00	\$39.00	\$0.00	\$429.00		
	Corequisite: Take the following G-203-01.												
OC LCT	<b>G-203L-02</b>	<b>344399 T</b>			<b>1-3:50 PM</b>		ONL	<b>HE-250-03</b>	<b>344432</b>				
	A. KOTASH	\$0.00	\$0.00	\$0.00	\$0.00	J. RHODEN		\$390.00	\$39.00	\$0.00	\$429.00		
	Corequisite: Take the following G-203-02.							Meets: 5/11-6/13.					
HAR LCT	<b>G-203L-20</b>	<b>344401 TH</b>			<b>6-8:50 PM</b>		<b>HE-252</b>	<b>FIRST AID/CPR/AED, 3 CREDITS</b>					
	J. WOODCOCK	\$0.00	\$0.00	\$0.00	\$0.00	This course supports the American Red Cross program for First Aid/CPR/AED and will teach participants the knowledge and skills needed to give immediate care to an injured or ill person and to decide whether advanced medical care is needed. Successful completion of the course leads to a Red Cross First Aid/CPR/AED certification for the lay responder.							
	Corequisite: Take the following G-203-20.												
<b>Health</b>							<b>HE-252 FIRST AID/CPR/AED, 3 CREDITS</b>						
<b>HE-163</b>	<b>BODY &amp; DRUGS I: INTRODUCTION TO ABUSE &amp; ADDICTION, 3 CREDITS</b>						ONL LCT	<b>HE-252-01</b>	<b>344434</b>				
	The first of a four-course sequence, this course examines the history of the use of addictive drugs, the definition of addiction, psychosocial and neurobiological causes of drug and behavioral addiction, addictive drug classifications, and the history of/introduction to addiction treatment, and access and utilize effective resources to improve and maintain mental and physical wellbeing.							K. WOODS	\$390.00	\$39.00	\$35.00	\$464.00	
								<b>HE-252-02</b>	<b>344436</b>				
ONL NCT	<b>HE-163-01</b>	<b>344408</b>					K. ARIZO	\$390.00	\$39.00	\$35.00	\$464.00		
ONL NCT	<b>HE-163-02</b>	<b>344409</b>					ONL LCT	<b>HE-252-04</b>	<b>344438</b>				
	T. PANTAGES	\$390.00	\$39.00	\$0.00	\$429.00	T. NELSON		\$390.00	\$39.00	\$35.00	\$464.00		
	T. PANTAGES	\$390.00	\$39.00	\$0.00	\$429.00								
<b>HE-164 BODY &amp; DRUGS II: ALCOHOL, 3 CREDITS</b>							<b>Health &amp; Fitness</b>						
The second of a four-course offering. Covers beverage alcohol as a drug, the history of alcohol use/abuse, physiological and psychological effects of alcohol use on the user, and the impact of that use on those around the user and on society at large, access and utilize effective resources to improve and maintain mental and physical wellbeing.							<b>HPE-295 HEALTH &amp; FITNESS FOR LIFE, 3 CREDITS</b>						
<b>Prerequisites:</b> HE-163							This course explores interaction of the nine dimensions of wellness (health). All of the related assignments are online. Students will assess their level of the health related components of fitness and develop an exercise plan for maintenance/improvement. Students are expected to spend a minimum of 3 hours per week exercising. Related topics include: nutrition, stress reduction, relaxation techniques, goal setting, and weight control.						
ONL NCT	<b>HE-164-01</b>	<b>344410</b>					<b>Recommended:</b> A completed physical by a doctor						
	T. PANTAGES	\$390.00	\$39.00	\$0.00	\$429.00	ONL NCT	<b>HPE-295-01</b>	<b>344493</b>					
							J. RHODEN	\$390.00	\$39.00	\$30.00	\$459.00		
<b>HE-204</b>	<b>NUTRITION &amp; WEIGHT CONTROL, 3 CREDITS</b>						ONL	<b>HPE-295-02</b>	<b>348060</b>				
	Methods of maintaining or improving nutrition by considering diets and dieting, obesity, types of exercise, physical testing, cardio-vascular fitness and nutritional concepts.							J. RHODEN	\$390.00	\$39.00	\$30.00	\$459.00	
ONL	<b>HE-204-01</b>	<b>344414</b>					<b>Health Professions</b>						
	J. BUEL	\$390.00	\$39.00	\$0.00	\$429.00								
<b>HE-223 SPORTS NUTRITION. 3 CREDITS</b>													

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 department first class  
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**ESPAÑOL:** Enseñado en español  
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**NCT:** No-Cost Text

Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total
		Instructor		Tuition Fee	Crs. Fee	

### HP-100 HEALTHCARE PROVIDER BLS/CPR, FIRST AID/BLOODBORNE PATHOGENS, 1 CREDIT

Introduces CPR, first aid, and bloodborne pathogens to individuals working in healthcare environments, home, and community settings. Covers skills to perform CPR and operate an Automatic External Defibrillator (AED) for adults/children/infants. Includes citizen-level first aid for providing initial care to persons injured or stricken by sudden illness where help is not immediately available. Covers how to minimize communicable disease transmission while providing emergency care.

**Recommended:** Computer access with internet capabilities

**Recommended Prerequisites:** WRD-098

HAR HYB	HP-100-01	344863 TBA				
	S. COOPER	\$130.00	\$13.00	\$15.00	\$158.00	
Additional costs associated with this course include: \$22 Bloodborne Pathogens Certificate, \$36 CPR Card, \$16.50 First Aid Certificate for a total of \$74.50 additional cost. The section will meet for four hours on a date TBD. More information will be given in the first couple weeks of class.						

### HP-110 MEDICAL TERMINOLOGY, 4 CREDITS

This course provides the foundational principles required for understanding medical terms used to communicate effectively within the healthcare field. This includes word meaning and discerning the difference between look-alike and sound-alike words through correct spelling and pronunciation. Students will develop the ability to read and comprehend the content of medical records and reports. Through the review of body systems this course includes introductions to disease processes, basic anatomy and physiology and associated terminology.

ONL	HP-110-01	344865				
	J. LAFRANCE	\$520.00	\$52.00	\$60.00	\$632.00	
ONL	HP-110-02	344866				
	W. HARTJE	\$520.00	\$52.00	\$60.00	\$632.00	
ONL	HP-110-03	344868				
	A. KOBLYNSKY	\$520.00	\$52.00	\$60.00	\$632.00	

### HP-120 INTRODUCTION TO HEALTH SCIENCES, 3 CREDITS

This course introduces students to Career Technical Education (CTE) Programs within Health Professions and prepares students for next steps in applying for competitive program entry.

**Prerequisites:** WRD-098 or placement in WR-101

ONL	HP-120-01	344869				
	C. GARNER	\$390.00	\$39.00	\$0.00	\$429.00	

## High School Diploma (AHSD)

*The Adult High School Diploma program is designed for students who have earned at least 14 credits. Students who are under 18 years old or whose high school class has not graduated must have an official CCC referral or a release from compulsory attendance to begin the program. Classes are assigned individually. Please contact the Skills Development Department at 503-594-3028.*

### ASE-042 JOB SKILLS COMPETENCY LAB, 0.5 CREDIT

High school credit only. Provides overview of college and career processes and expectations including cooperative work experience for employed high school students to earn elective credit. Focuses on appropriate work and college behaviors, decision making techniques, communication skills, and teamwork. May be repeated for up to 2 high school credits. Required: Student Petition.

#### Campus Locations:

**HAR:** Harmony Community Campus  
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#### Distance Education Notification:

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**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total
		Instructor		Tuition Fee	Crs. Fee	

OC HYB NCT	ASE-042-03	344046 TTH			5-5:50 PM	
	M. TIZO	\$0.00	\$0.00	\$0.00	\$0.00	
Required: Student Petition.						

## History

### HST-101 HISTORY OF WESTERN CIVILIZATION, 4 CREDITS

Origins and development of Western Civilization with a primary focus on Europe from ancient times to ca. 1300.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

ONL NCT	HST-101-01	344482				
	P. MCFARLAND	\$520.00	\$52.00	\$0.00	\$572.00	

### HST-103 HISTORY OF WESTERN CIVILIZATION, 4 CREDITS

Development of Western Civilization with an emphasis on Europe from the 19th century to the present.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

OC HYB NCT	HST-103-01	344483 W			10-11:50 AM	
	P. MCFARLAND	\$520.00	\$52.00	\$0.00	\$572.00	
ONL NCT	HST-103-02	344485				
	P. MCFARLAND	\$520.00	\$52.00	\$0.00	\$572.00	

### HST-132 HISTORY OF LANGUAGE AND THE WRITTEN WORD IN WESTERN CIVILIZATION, 4 CREDITS

Explores the topics of language and the written word in western civilization from ancient Greece to the present and relates them to the political, social, economic, intellectual, and cultural trends of each time period.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

ONL	HST-132-01	344486				
	P. MCFARLAND	\$520.00	\$52.00	\$0.00	\$572.00	

### HST-203 HISTORY OF THE UNITED STATES, 4 CREDITS

Covers the period of United States history since and including WWI.

**Prerequisite or Corequisite:** WRD-098 or placement in WR-121Z

**Recommended Prerequisites:** Sequence of HST-201, HST-202 and HST-203 is taken in order

OC	HST-203-01	344488 MW			1-2:50 PM	
	J. PARKER	\$520.00	\$52.00	\$0.00	\$572.00	
ONL	HST-203-02	344491				
	J. PARKER	\$520.00	\$52.00	\$0.00	\$572.00	

### HST-280 HISTORY/CWE, 2-6 CREDITS (VAR)

Cooperative work experience. Provides students with on-the-job work experience in the field of history. Required: Student Petition.

**Corequisites:** CWE-281

OC NCT	HST-280-01	344492				
	P. MCFARLAND	\$780.00	\$78.00	\$45.00	\$903.00V	
Required: Student Petition. Corequisite: Take the following CWE-281-06.						

## Horticulture/Arboriculture/Landscape/Organic Farming

For more information call 503-594-3292 or email [horticulture@clackamas.edu](mailto:horticulture@clackamas.edu)

### HOR-112 HORTICULTURE CAREER EXPLORATION, 2 CREDITS

#### Other Coding Translations:

**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

#### ESPAÑOL: Enseñado en español

**LCT:** Low-Cost Text  
**NCT:** No-Cost Text



Course No      Course Title, Credits							Course No      Course Title, Credits						
Section No	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Time				Section No	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Time			
Instructor	Tuition	Fee	Crs. Fee	Total			Instructor	Tuition	Fee	Crs. Fee	Total		
This course is a survey of the various career options available to students in the horticulture industry, with emphasis on nursery and greenhouse production, retail nursery, organic fruit and vegetable production, and landscape maintenance/installation. Includes field trips to local businesses. Oregon State University transfer course.							Practical experience with seasonal (spring) horticulture activities in the areas of container nurseries, greenhouses, and landscape management.						
<b>Prerequisites:</b> HOR-133							<b>Prerequisites:</b> HOR-133						
OC LCT	HOR-112-01	344444 TH		1-3:50 PM			OC	HOR-143-01	344457 F		11:30 -4:30 PM		
	E. ROBERTS		\$260.00	\$26.00	\$50.00	\$336.00		G. LOEFFLER		\$260.00	\$26.00	\$50.00	\$336.00
	Meets: Thursdays 4/2-5/21.							Required attendance on Friday 5/8.					
<b>HOR-120 PESTICIDE LAWS &amp; SAFETY, 1 CREDIT</b>							<b>HOR-214 ORGANIC CUT FLOWER FARMING, 2 CREDITS</b>						
This course engages students with the laws, regulations, and best management practices used to control pests, weeds, and diseases. Focus on applicator safety, environmental protection, and storage and handling requirements. Prepares students to sit for the Oregon Pesticide Laws & Safety exam.							Essential organic flower farming techniques, including seasonal activities such as planning, propagation of cut flowers, transplanting, direct seeding, weeding, harvesting, bed preparation, and soil, water, and fertilizer management as they pertain to cut flower growing. Class lecture, field trips, and lab are all included in this course. This format has been selected to create a hands-on experience for each student in producing cut flowers for market.						
ONL LCT	HOR-120-01	344446					OC HYB	HOR-214-01	344462 F		8-11:50 AM		
	J. WENTWORTH-PLATO		\$130.00	\$13.00	\$50.00	\$193.00		D. ROSTAD		\$260.00	\$26.00	\$40.00	\$326.00
<b>HOR-123 LANDSCAPE MAINTENANCE, 3 CREDITS</b>							Meets: Fridays 5/15-6/12; additional hours online.						
Principles and practices of sustainable landscape maintenance, plant growth and development, soil-water-fertilizer management, pruning, turf, pest control, diagnosis of problems in trees and shrubs, and maintenance scheduling.							<b>HOR-215 HERBACEOUS PERENNIALS, 3 CREDITS</b>						
OC	HOR-123-01	344447 W		8-11:50 AM			The identification, propagation, selection and garden culture as well as individual attributes of herbaceous perennial plants, including the evolution of perennial garden design and current gardening styles. Oregon State University transfer course.						
	D. FRANEK		\$390.00	\$39.00	\$40.00	\$469.00	OC	HOR-215-01	344463 T		1-4:50 PM		
<b>HOR-135 PROPAGATION OF EDIBLE PLANTS, 3 CREDITS</b>								L. BEUTLER		\$390.00	\$39.00	\$45.00	\$474.00
Reproduce food plants using a variety of methods, including seed, cutting and grafting techniques. Instruction will focus on methods suitable for sustainable farm operations.							<b>HOR-228 PLANT IDENTIFICATION/SPRING, 4 CREDITS</b>						
OC LCT	HOR-135-01	344450 W		8-11:50 AM			Identification of flowering trees, shrubs, and groundcovers, including their cultural requirements in the landscape. Oregon State University transfer course.						
	G. LOEFFLER		\$390.00	\$39.00	\$70.00	\$499.00	OC LCT	HOR-228-01	344465 T		8-11:50 AM		
<b>HOR-140 SOILS, 3 CREDITS</b>								J. WENTWORTH-PLATO		\$520.00	\$52.00	\$45.00	\$617.00
Soil characteristics and management, including nutritional elements and the relationship between the soil and plant growth.							OC HYB LCT	HOR-228-02	344467 W		6-8:30 PM		
OC LCT	HOR-140-01	344451 W		1-3:50 PM				J. WENTWORTH-PLATO		\$520.00	\$52.00	\$25.00	\$597.00
	D. FRANEK		\$390.00	\$39.00	\$65.00	\$494.00	<b>HOR-240 IRRIGATION PRACTICES, 3 CREDITS</b>						
<b>HOR-141 ORGANIC FARMING PRACTICUM/SPRING, 4 CREDITS</b>							Materials, equipment, and methods used to install and repair irrigation systems in landscape areas.						
Essential organic farming practices, including seasonal activities such as production of transplants, direct seeding, pest, disease, and weed management strategies, bed preparation, equipment operations, and soil, water and fertilizer management. Class lecture, field trips, and lab are all included in this course. This format has been selected to create a hands-on experience for each student in seasonal crop production.							OC HYB LCT	HOR-240-01	344471 W		6-8:50 PM		
OC LCT	HOR-141-01	344453 TTH		8-11:50 AM				A. CHASTAIN		\$390.00	\$39.00	\$45.00	\$474.00
	D. ROSTAD		\$520.00	\$52.00	\$80.00	\$652.00		G. KUNKLE					
<b>HOR-142 GREENHOUSE II, 3 CREDITS</b>							<b>HOR-244 ECOLOGICAL LANDSCAPE DESIGN, 3 CREDITS</b>						
Detailed study of environmental influences on individual crops, their requirements, scheduling, including annual, biennial, and perennial plant production.							Overview of landscape design features that will benefit the natural environment, provide habitat for wildlife and require minimal inputs of energy, water and other materials. Includes basic design concepts, design terminology and techniques, as well as ideas for marketing of sustainable designs.						
<b>Prerequisites:</b> HOR-122							<b>Prerequisites:</b> HOR-229						
OC	HOR-142-01	344455 TH		8-11:50 AM			<b>Recommended Prerequisites:</b> Prior Plant ID knowledge or HOR-226, HOR-227, and HOR-228						
	D. FRANEK		\$390.00	\$39.00	\$50.00	\$479.00	OC HYB	HOR-244-01	345472 T		6-8:50 PM		
<b>HOR-143 HORTICULTURE PRACTICUM/SPRING, 2 CREDITS</b>								M. MELCO		\$390.00	\$39.00	\$45.00	\$474.00
								Meets via Zoom w/ on-campus labs 3/31, 5/5 & 6/9.					

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Growing organically addresses two of today's common concerns: health and sustainability. Learn organic gardening skills like how to create a garden plan, build healthy soil, make and use your own compost, add fertility with cover crops, choose the best crop varieties for our region, and practice proper planting and harvest techniques. This class is great for beginners, and gardeners who are looking to take their skills to a deeper level.										
OC LCT	HOR-246-01	344473 T	G. LOEFFLER			\$260.00	\$26.00	1-4:50 PM	\$50.00	\$336.00
HOR-249 LANDSCAPE BIDDING AND ESTIMATING, 1 CREDIT										
This class is an introduction to bidding and estimating landscape projects. Students will interpret and measure landscape plans in order to perform take-offs and calculate quantities of materials needed; calculate direct costs using price lists and production rates; calculate and analyze overhead costs, net and gross profit margins, and break-even points; and review computer software options.										
Recommended Prerequisite or Corequisite: HOR-123 or HOR-224										
oc	HOR-249-01	344474 M	A. CHASTAIN			\$130.00	\$13.00	3-4:50 PM	\$15.00	\$158.00
Meets: Mondays 3/30-4/27.										
HOR-250 ORGANIC HERB GROWING, 1 CREDIT										
Study of herb propagation, growing, and use. Identification of herbs, planning, site requirements and care of plants are covered. Learn how to plan for garden, small-scale, and larger farm production.										
OC LCT	HOR-250-01	344475 F	D. ROSTAD			\$130.00	\$13.00	8-11:50 AM	\$30.00	\$173.00
Meets: Fridays 4/3-5/1.										
HOR-261 TREE DIAGNOSTICS, 2 CREDITS										
Theory and practice in diagnosing specific biotic and abiotic causes of poor tree health. Includes identification of symptoms, use of monitoring tools and effective customer communications.										
Prerequisites: HOR-120, HOR-216, HOR-225. HOR-236 or HOR-237										
OC LCT	HOR-261-01	344476 TH	J. WENTWORTH-PLATO			\$260.00	\$26.00	1-4:50 PM	\$90.00	\$376.00
If you have arboriculture industry experience and wish to take this class, contact jimwp@clackamas.edu.										
HOR-263 PLANT HEALTH CARE PRACTICUM, 2 CREDITS										
Experience best management practices in Plant Health Care for trees and shrubs of the Pacific Northwest. Synthesize information from pre-requisite courses to evaluate work sites for risk, plant health, and pathogens. Propose maintenance schedules and adapt them based on customer interaction. Working as a team, maintain landscapes on CCC properties using hand and power tools such as shears, saws, mowers, chippers, and sprayers.										
Prerequisites: HOR-115, HOR-131 and HOR-216. HOR-236 or HOR-237										
OC LCT	HOR-263-01	344478 F	E. ROBERTS			\$260.00	\$26.00	8-11:50 AM	\$95.00	\$381.00
HOR-280 HORTICULTURE/CWE, 3 CREDITS										
Cooperative work experience. On-the-job experience in the student's major course of study. Students are expected to work a minimum of 90 job site hours. May be repeated for up to 6 credits. Required: Student Petition.										
Corequisites: CWE-281										
OC	HOR-280-01	344479	G. LOEFFLER			\$390.00	\$39.00		\$45.00	\$474.00
Required: Student Petition. Contact: gentiana.loeffler@clackamas.edu. Corequisite: Take the following CWE-281-06.										
HOR-281 HORTICULTURE/CWE, 6 CREDITS										
Cooperative work experience. On-the-job experience in the student's major course of study. Students are expected to work a minimum of 180 job site hours. May be repeated for up to 12 credits. Required: Student Petition.										
Corequisites: CWE-281										
OC	HOR-281-01	344481	G. LOEFFLER			\$780.00	\$78.00		\$45.00	\$903.00
Required: Student Petition. Contact: gentiana.loeffler@clackamas.edu. Corequisite: Take the following CWE-281-06.										
HOR-282 HORTICULTURE/CWE, 3 CREDITS										
Cooperative work experience. On-the-job experience in the student's major course of study. Students are expected to work a minimum of 90 job site hours. May be repeated for up to 6 credits. Required: Student Petition.										
Corequisites: CWE-281										
Required: Students are expected to work a minimum of 90 job site hours										
oc	HOR-282-01	344484	G. LOEFFLER			\$390.00	\$39.00		\$45.00	\$474.00
Required: Student Petition. Contact: gentiana.loeffler@clackamas.edu. Corequisite: Take the following CWE-281-06.										
HOR-285 ORGANIC FARMING/CWE, 3 CREDITS										
Cooperative work experience. On-the-job experience working with an agricultural business/farm. Students are expected to work a minimum of 90 job site hours. May be repeated for up to 6 credits. Required: Student Petition.										
Corequisites: CWE-281										
Required: Students are expected to work a minimum of 90 job site hours										
oc	HOR-285-01	344490	G. LOEFFLER			\$390.00	\$39.00		\$45.00	\$474.00
Required: Student Petition. Contact: gentiana.loeffler@clackamas.edu. Corequisite: Take the following CWE-281-06.										
XHOR-0005 FRUIT TREE GRAFTING: BEGINNING, 0 CREDIT										
Hands-on explanation and practice in bench grafting of fruit trees under the supervision of experienced HOEC grafters. Each student will leave the workshop with a grafted apple tree on dwarf rootstock.										
oc	XHOR-0005-01	344749 S	T. LORDY					9:30 -11:30 AM		
Required: Student Petition. Meets: Saturday 3/28. Register at https://bit.ly/horteventbrite Fee: \$45. Contact horticulture@clackamas.edu with questions.										
oc	XHOR-0005-02	344750 S	T. LORDY					12-2:00 PM		
Required: Student Petition. Meets: Saturday 3/28. Register at https://bit.ly/horteventbrite Fee: \$45. Contact horticulture@clackamas.edu with questions.										

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Instructor	Tuition	Fee	Crs. Fee				Instructor	Tuition	Fee	Crs. Fee			
<b>XHOR-C026</b>	<b>LANDSCAPE IRRIGATION SYSTEM INSTALLATION &amp; MAINTENANCE, 0.80 CEUS</b>						<b>Prerequisites:</b> HS-100 and HS-154 <b>Prerequisite or Corequisite:</b> HS-156 <b>Recommended Prerequisites:</b> HS-103 and HS-206						
oc	<b>XHOR-C026-01</b>	<b>344753 S</b>			<b>8-5:00 PM</b>		<b>ONL HS-170-01</b>	<b>344466</b>					
	K. MCCALED						J. LOVELESS		\$130.00	\$13.00	\$0.00		\$143.00
	Required: Student Petition. Meets: Saturday 4/11. Register at <a href="https://bit.ly/horteventbrite">https://bit.ly/horteventbrite</a> Fee: \$80. Contact horticulture@clackamas.edu with questions.												
<b>XHOR-C040</b>	<b>FLOWERING PLANT IDENTIFICATION, 0.30 CEUS</b>						<b>HS-206 TRAUMA INFORMED PRACTICES, 3 CREDITS</b> In this course, students will learn how to recognize and respond to the impact of traumatic stress. Students will gain knowledge and skills they can infuse into their practices and act in a way that maximizes physical and psychological safety for clients and themselves. Students will understand how trauma impacts the brain, body, as well as development. Topics such as vicarious trauma, cultural trauma, and secondary trauma will be examined and discussed. <b>Recommended Prerequisites:</b> CJA-101 or HS-100 or any other 100-level course that discusses human behavior, development, or social interactions						
oc	<b>XHOR-C040-01</b>	<b>344755 S</b>			<b>9-12:00 PM</b>		<b>OC HYB LCT HS-206-01</b>	<b>343631 T</b>				<b>9-10:50 AM</b>	
	J. WENTWORTH-PLATO						K. STORY		\$390.00	\$39.00	\$0.00		\$429.00
	Required: Student Petition. Meets: Saturday 5/2. Register at <a href="https://bit.ly/horteventbrite">https://bit.ly/horteventbrite</a> Fee: \$20.												
							Meets: 3/31, 4/14, 4/28, 5/12, 5/26.						
							<b>HS-216 GROUP COUNSELING SKILLS, 3 CREDITS</b> This course provides students with strategies and skills for group work with a variety of clients. Explores leadership styles and skills, group formation and stages, and the ethics of working with groups. The course will address the knowledge needed to develop, run, and evaluate groups for a variety of human service topics, including substance use treatment. Theories of therapeutic group work will also be discussed. <b>Prerequisites:</b> HS-156 with a C or better						
							<b>REM HS-216-01</b>	<b>344468 M</b>				<b>4-5:20 PM</b>	
							T. BOYLE-GALESTIANZ		\$390.00	\$39.00	\$0.00		\$429.00
							<b>HS-232 CASE MANAGEMENT, 3 CREDITS</b> Introduces case management techniques used by corrections and human services professionals in one-on-one and group contacts with clients. Explores a variety of case management materials, with an emphasis placed upon objective case planning and monitoring. <b>Prerequisite or Corequisite:</b> HS-156 and HS-210						
							<b>ONL LCT HS-232-01</b>	<b>343632</b>					
							C. BAKER		\$390.00	\$39.00	\$0.00		\$429.00
							<b>HS-270 HUMAN SERVICES PRACTICUM SEMINAR, 2 CREDITS</b> Focuses on field experience for students in a variety of human service settings, paralleling duties regularly assigned to human service workers. The course offers students a chance to discuss issues faced in the field, and apply human services concepts and theories to their work. Students will reflect on program curriculum and how their knowledge influences the work in the field. May be repeated for up to 6 credits. Required: Student Petition. <b>Corequisites:</b> GRN-280, HS-280, HS-281, or HS-282						
							<b>OC HYB HS-270-01</b>	<b>344470 W</b>				<b>2:10 -4:00 PM</b>	
							J. SHANNON		\$260.00	\$26.00	\$0.00		\$286.00
							Required: Student Petition. Meets: 4/1, 4/15, 4/29, 5/13, 5/27.						
							<b>HS-280 HUMAN SERVICES GENERALIST I: CWE/PRACTICUM, 2-6 CREDITS (VAR)</b>						

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<p>Cooperative work experience. Supervised experience in human services including but not limited to: social service; early childhood care; criminal/juvenile justice; gerontology; and other occupations. May be repeated for up to 12 credits. Required: Student Petition.</p> <p><b>Prerequisites:</b> HS-170</p> <p><b>Corequisites:</b> HS-270</p>							<p>This second course in industrial machinery will focus on advanced concepts in machinery trouble shooting, repair and maintenance. Students will learn about the integration of mechanical, fluid power and electrical systems, their characteristics and repair. Additionally, mechanical concepts of laser shaft alignment, vibration analysis and thermal diagnosis will be covered. Other topics will include electromechanical systems, lock-out tag-out, advanced mechanical diagnosis, motors and motor controls.</p> <p><b>Prerequisites:</b> IMT-120</p>								
OC LCT	HS-280-01	344472	J. LOVELESS	\$780.00	\$78.00	\$45.00		IMT-220-01	344498	TTH			5-7:50 PM		
			Required: Student Petition.			\$903.00V	M. BABCOCK			\$390.00	\$39.00	\$153.75	\$582.75		
HS-281	HUMAN SERVICES GENERALIST II: CWE/PRACTICUM, 2-6 CREDITS (VAR)														
<p>Cooperative work experience level II. Supervised experience in human services including but not limited to: social service; early childhood care; criminal/juvenile justice; gerontology; and other related occupations. May be repeated for up to 12 credits. Required: Student Petition.</p> <p><b>Prerequisites:</b> HS-170</p> <p><b>Corequisites:</b> HS-270</p>															
OC LCT	HS-281-01	344477	J. LOVELESS	\$780.00	\$78.00	\$45.00		IMT-223-01	344499	TTH			1-3:50 PM		
			Required: Student Petition.			\$903.00V	B. HOFFMAN			\$390.00	\$39.00	\$153.75	\$582.75		
HS-282	HUMAN SERVICES GENERALIST III: CWE/PRACTICUM, 2-6 CREDITS (VAR)														
<p>Cooperative work experience level III. Supervised experience in human services including but not limited to: social service; early childhood care; criminal/juvenile justice; gerontology, and other related occupations. May be repeated for up to 12 credits. Required: Student Petition.</p> <p><b>Prerequisites:</b> HS-170. HS-280 or HS-281</p> <p><b>Corequisites:</b> HS-270</p>															
OC LCT	HS-282-01	344480	J. LOVELESS	\$780.00	\$78.00	\$45.00		IMT-230-01	348006	MW			9-11:50 AM		
			Required: Student Petition.			\$903.00V	C. CONNORS			\$390.00	\$39.00	\$131.25	\$560.25		
<h2>Industrial Maintenance Technology</h2>															
IMT-108	RIGGING AND LIFTING, 2 CREDITS														
<p>This course provides instruction in rigging and lifting techniques including usage and inspection of rigging equipment, developing lift plans, anchoring to concrete, and heavy machinery installation. Students will be expected to perform lifts independently and in groups.</p> <p><b>Prerequisites:</b> MTH-050</p>															
OC	IMT-108-01	344496	MW			5:30 -7:20 PM									
			C. CONNORS	\$260.00	\$26.00	\$102.50	\$388.50								
IMT-110	PREVENTATIVE MAINTENANCE, 2 CREDITS														
<p>This course will introduce students to the basics of preventative maintenance programs in an industrial environment. Students will learn about how maintenance departments are organized, how projects and tasks are defined and delegated. Topics will include maintenance organization, work order systems, maintenance planning, scheduling, quality control, controlling parts and materials costs.</p> <p><b>Prerequisites:</b> MTH-050</p>															
OC	IMT-110-01	344497	TTH			2-3:50 PM									
			M. BABCOCK	\$260.00	\$26.00	\$102.50	\$388.50								
IMT-220	INDUSTRIAL MACHINERY II, 3 CREDITS														
<h2>Journalism</h2>															
J-134	PHOTOJOURNALISM, 4 CREDITS														
<p>Introduces the student to photojournalism, emphasizing composition, lighting and creative ways to illustrate a news story through photography.</p>															
ONL	J-134-01	347982													
			J. SONNENMAIR	\$520.00	\$52.00	\$10.00	\$582.00								
J-211	MASS MEDIA & SOCIETY, 4 CREDITS														
<p>This course takes students through a critical study of the production and consumption of mass media, including television, radio, books, film, news, advertising and the internet. Students also examine the economic and social organization of mass media, the growth of new media technologies, and the relationship between media and the public.</p> <p><b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z</p>															
OC NCT	J-211-01	343798	MW			10-11:50 AM									
			M. JONES	\$520.00	\$52.00	\$10.00	\$582.00								
J-215	COLLEGE NEWS: WRITING & PHOTOGRAPHY, 4 CREDITS														
<p>Students work as writers, photographers and editors on The Clackamas Print, the college's student-run news website, newspaper and social media sites. Students study and produce journalism stories and photos. In doing so, they learn different writing styles, photography rules, ethical standards of news gathering and the rights of a free press in a democracy. May be repeated for up to 8 credits.</p>															

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**Recommended Prerequisites:** Placement in WR-121Z

oc	<b>J-215-01</b> M. JONES	<b>343801 MW</b>			<b>1-2:50 PM</b>	
			\$520.00	\$52.00	\$10.00	\$582.00

**J-225 INTERMEDIATE COLLEGE NEWS: WRITING & PHOTOGRAPHY, 4 CREDITS**

Intermediate news writing and photojournalism for publication in the student-run Clackamas Print news website, newspaper and social media sites. Generate original story ideas, publish photo essays and complete more complicated interviews on multiple projects in news, arts, sports and opinion writing. Apply media ethics to social, online and print media. May be repeated for up to 8 credits.

**Prerequisites:** J-215

**Recommended Prerequisites:** Placement in WR-121Z

oc	<b>J-225-01</b> M. JONES	<b>343804 MW</b>			<b>1-2:50 PM</b>	
			\$520.00	\$52.00	\$0.00	\$572.00

**J-226 INTRODUCTION TO COLLEGE NEWS: DESIGN & PRODUCTION, 4 CREDITS**

Students work as designers and media creators for The Clackamas Print, the college's award-winning student newspaper, website and social media sites. Students design the student newspaper, create social media posts and produce related multimedia content using Adobe software and other products. May be repeated for up to 8 credits.

**Recommended Prerequisites:** Placement in WR-121Z

oc	<b>J-226-01</b> M. JONES	<b>343808 T</b>			<b>1-4:50 PM</b>	
			\$520.00	\$52.00	\$10.00	\$582.00

**J-227 INTERMEDIATE COLLEGE NEWS: DESIGN & PRODUCTION, 4 CREDITS**

Offers students intermediate work as designers and media creators for The Clackamas Print, the college's award-winning student newspaper, website and social media sites. Students design the student newspaper, create social media posts and produce related multimedia journalism content using Adobe software and other products. May be repeated for up to 8 credits.

**Prerequisites:** J-226

oc	<b>J-227-01</b> M. JONES	<b>343811 T</b>			<b>1-4:50 PM</b>	
			\$520.00	\$52.00	\$0.00	\$572.00

**J-228 ADVANCED COLLEGE NEWS: DESIGN & PRODUCTION, 4 CREDITS**

Offers students advanced work as designers and media creators for The Clackamas Print, the college's award-winning student newspaper, website and social media sites. Students design the student newspaper, create social media posts and produce related multimedia journalism content using Adobe software and other products. May be repeated for up to 8 credits.

**Prerequisites:** J-227

oc	<b>J-228-01</b> M. JONES	<b>343816 T</b>			<b>1-4:50 PM</b>	
			\$520.00	\$52.00	\$0.00	\$572.00

**J-235 ADVANCED COLLEGE NEWS: WRITING & PHOTOGRAPHY, 4 CREDITS**

Advanced news writing and photography for publication online, in social media and in the student-run newspaper, The Clackamas Print. Students apply Associated Press style, use journalism ethics and cover a variety of topics and events in words and photos to build their journalism portfolios. May be repeated for up to 8 credits.

**Prerequisites:** J-225

**Recommended Prerequisites:** Placement in WR-121Z

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oc	<b>J-235-01</b> M. JONES	<b>343819 MW</b>			<b>1-2:50 PM</b>	
			\$520.00	\$52.00	\$0.00	\$572.00

**J-280 JOURNALISM/CWE, 2-6 CREDITS**

Cooperative work experience. Provides the student with on-the-job experience and training related to journalism. Required: Student Petition.

**Corequisites:** CWE-281

**Recommended Prerequisites:** J-215

ONL NCT	<b>J-280-01</b> M. JONES	<b>343823</b>				
			\$780.00	\$78.00	\$45.00	\$903.00V
			Required: Student Petition.			

**J-280A PUBLIC RELATIONS/CWE, 2-6 CREDITS**

Cooperative work experience. Provides the student with on-the-job experience and training related to public relations. Required: Student Petition.

**Corequisites:** CWE-281

ONL NCT	<b>J-280A-01</b> M. JONES	<b>343836</b>				
			\$780.00	\$78.00	\$45.00	\$903.00V
			Required: Student Petition.			

## Library

**LIB-101 INTRODUCTION TO LIBRARY RESEARCH, 1 CREDIT**

Introduces and strengthens college-level research skills. Students will build an understanding of strategies for finding, evaluating, and using information responsibly. Prepares students for success in research-based college assignments and real-life research needs.

ONL NCT	<b>LIB-101-01</b> TBA	<b>344500</b>				
			\$0.00	\$0.00	\$0.00	\$0.00
			Meets: 3/30-5/30.			

## Machine Tool Technology

**MTT-112 MANUAL MACHINING II, 4 CREDITS**

This course is a continuation of machine tool operations. It covers set-up and operation of the vertical milling machine, lathe boring techniques, surface grinding and screw thread nomenclature.

**Prerequisites:** MTT-111

oc	<b>MTT-112-01</b> J. TRAVER	<b>344527 MW</b>			<b>5-8:50 PM</b>	
			\$520.00	\$52.00	\$205.00	\$777.00

**MTT-113 MANUAL MACHINING III, 4 CREDITS**

This course is a continuation of machine tool operations. Topics covered include offset boring heads, rotary tables, indexing devices, taper attachments and cylindrical grinding. Additional emphasis is also placed on inspections technique, technical math and optical comparators.

**Prerequisites:** MTT-112

oc	<b>MTT-113-01</b> J. TRAVER	<b>344528 MW</b>			<b>7:30 -11:20 AM</b>	
			\$520.00	\$52.00	\$205.00	\$777.00

**MTT-121 CNC I: SET-UP AND OPERATION, 4 CREDITS**

This is the first course in the CNC sequence. Students will learn basic skills including how to properly set-up and operate both CNC milling and turning centers. Students will also learn G & M codes related to basic machine set-up and operation. Designed for persons with little or no previous CNC experience.

oc	<b>MTT-121-01</b> J. CARLSTON	<b>344529 TTH</b>			<b>8-11:50 AM</b>	
			\$520.00	\$52.00	\$205.00	\$777.00

Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total
		Instructor		Tuition	Fee	Crs. Fee
<b>MTT-122</b>	<b>CNC II: PROGRAMMING AND OPERATION, 4 CREDITS</b>					
This is the second course in the CNC sequence. Students will learn G&M-code programming for milling and turning while they build their set-up and operation skills. There will also be an introduction to set-up probing, 4-axis mill programming and machining, sub-programming and process documentation.						
<b>Prerequisites:</b> MTT-111, MTT-121, MTH-050						
oc	<b>MTT-122-01</b>	<b>344530 TTH</b>			<b>5:30 -9:20 PM</b>	
	J. CARLSTON		\$520.00	\$52.00	\$205.00	\$777.00

<b>MTT-141</b>	<b>CAD/CAM I, 4 CREDITS</b>					
This course is the first in the CAM series and will introduce students to computer-aided part creation and programming. Students will use CAD/CAM software to generate Numerical Control (NC) code to produce machined products. Model creation, process verification, code generation, and CAD/CAM integration will be covered.						
<b>Recommended Prerequisites:</b> MTT-121						
oc	<b>MTT-141-01</b>	<b>344533 MW</b>			<b>8-11:50 AM</b>	
	C. LETTENMAIER		\$520.00	\$52.00	\$205.00	\$777.00

<b>MTT-254</b>	<b>MILL/TURN MACHINING, 3 CREDITS</b>					
This class will introduce students to CNC mill-turn machines, their programming, and setup procedures. The course will explore limitations, advantages, and configurations of typical mill/turn machines including rotation style and set-up orientation. Post processing and virtual machine simulation will also be discussed.						
<b>Prerequisites:</b> MTT-122						
oc	<b>MTT-254-01</b>	<b>344536 MW</b>			<b>1-3:50 PM</b>	
	C. LETTENMAIER		\$390.00	\$39.00	\$153.75	\$582.75

<b>MTT-269</b>	<b>CAPSTONE MACHINING II, 3 CREDITS</b>					
This final course in the capstone project series will continue to allow students to demonstrate mastery of core skills that are learned in the machining program while manufacturing a complex product. Special emphasis will be given to 4 and 5-axis CNC machining and programming, material preparation for CNC machining, and precision surface grinding. May be repeated for up to 3 credits.						
<b>Prerequisites:</b> MTT-268						
oc	<b>MTT-269-01</b>	<b>344538 MW</b>			<b>5:30 -8:20 PM</b>	
	C. LETTENMAIER		\$390.00	\$39.00	\$153.75	\$582.75

## Manufacturing Engineering Technology

*All degree seeking students should arrange to speak to a faculty advisor prior to registering. Call 503-594-3318 for more information, or contact Advising, 503-594-3475.*

<b>MET-112</b>	<b>INTRODUCTION TO ENGINEERING AND TECHNOLOGY CAREERS, 2 CREDITS</b>					
This course is designed to provide an overview of five major engineering disciplines, their subsets and their respective career pathways. The course will also introduce students to the economic, environmental, social, political, ethical, as well as the health and safety realities of the engineering work environment. This course is intended to guide students in making appropriate career choices by exploring the following topics: engineering job demands, earning potential, marketability, licensure, and continuing education requirements.						
ONL	<b>MET-112-01</b>	<b>344505</b>				
	S. PAVEY		\$260.00	\$26.00	\$102.50	\$388.50

**Campus Locations:**  
**HAR:** Harmony Community Campus  
**OC:** Oregon City Campus  
**WILS:** Wilsonville Training Center  
**OFF:** Other Off-Campus Location

**Distance Education Notification:**  
**ONL:** Online Only  
**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

<b>Course No</b>	<b>Course Title, Credits</b>	<b>Section No</b>	<b>Crs Reg.</b>	<b>Days (M,T,W,Th,F,S,SU)</b>	<b>Time</b>	<b>Total</b>
		Instructor		Tuition	Fee	Crs. Fee
<b>MET-170</b>	<b>INTRODUCTION TO MANUFACTURING PROCESSES, 3 CREDITS</b>					
This is a survey course to introduce students to the fundamental processes that are used to manufacture everyday products. Includes machining, casting, forming, welding, molding, composites and microelectronics fabrication.						
oc	<b>MET-170-01</b>	<b>344506 MW</b>			<b>3:30 -4:50 PM</b>	
	M. BABCOCK		\$390.00	\$39.00	\$153.75	\$582.75

## Manufacturing Technology

*All degree seeking students should arrange to speak to a faculty advisor prior to registering. Call 503-594-3318 for more information, or contact Advising, 503-594-3475.*

<b>MFG-103</b>	<b>MACHINING FOR FABRICATION &amp; MAINTENANCE, 3 CREDITS</b>					
This course is an introduction to metal working for welders, fabricators, maintenance personnel and others who need to understand simple machining principles. Students will be introduced to precision measurement with calipers and micrometers. Combination squares, protractor dividers and scribes will be used for semi-precision layout of workpieces in preparation for machining. The elementary use of the drill press, band saw, milling machine and lathe, as well as hand tools, will be practiced during hands-on labs. A discussion of thread systems will include nomenclature, measurement, tapping, chasing and repair.						
<b>Prerequisites:</b> MTH-050 or higher						
oc	<b>MFG-103-01</b>	<b>344507 TTH</b>			<b>2-4:50 PM</b>	
	J. CARLSTON		\$390.00	\$39.00	\$153.75	\$582.75

<b>MFG-104</b>	<b>PRINT READING, 3 CREDITS</b>					
Introduction to basic print reading. Students will use the principles of orthographic projection and current industry standards as they apply this knowledge to interpreting manufacturing prints.						
oc	<b>MFG-104-01</b>	<b>344508 TTH</b>			<b>5-6:50 PM</b>	
	J. TRAVER		\$390.00	\$39.00	\$153.75	\$582.75

<b>MFG-107</b>	<b>INDUSTRIAL SAFETY &amp; FIRST AID, 3 CREDITS</b>					
This course is designed to provide the student with a basic understanding of safety hazards and first aid in the workplace. Includes eye safety, grinding wheel hazards, electrical/chemical hazards, slips, falls and back injuries. Instruction in first aid, AED and CPR and OSHA 10.						
OC HYB	<b>MFG-107-01</b>	<b>344509 F</b>			<b>2-4:50 PM</b>	
	L. HILLYARD		\$390.00	\$39.00	\$153.75	\$582.75
OC HYB	<b>MFG-107-02</b>	<b>348007 M</b>			<b>1-3:50 PM</b>	
	L. HILLYARD		\$390.00	\$39.00	\$153.75	\$582.75

<b>MFG-131</b>	<b>BASIC ELECTRICITY II, 3 CREDITS</b>					
Covers application of several theories learned in previous term. Additional topics will include: motors, controls, alignment, pulleys and gears, troubleshooting theory, power distribution and lighting, electrical wiring and schematics.						
<b>Recommended Prerequisites:</b> MFG-130 and MTH-050						
oc	<b>MFG-131-01</b>	<b>348008 MW</b>			<b>12:30 -1:50 PM</b>	
	C. CONNORS		\$390.00	\$39.00	\$153.75	\$582.75

<b>MFG-132</b>	<b>BASIC ELECTRICITY III, 3 CREDITS</b>					
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**Other Coding Translations:**  
**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

This course offers continued study in the control of industrial electric motors. Concepts in the application of relays, motor starters, switches and overload protection are explored from both a practical and theoretical viewpoint. Wiring techniques and electrical devices for residential, commercial and industrial facilities are presented along with hands-on activities. Additional topics include: electrical conductors, installation materials, and the scope of work performed by licensed electricians.

**Recommended Prerequisites:** MFG-130 and MFG-131

oc	<b>MFG-132-01</b>	<b>344515 TH</b>			<b>5-7:50 PM</b>	
	B. KARM		\$390.00	\$39.00	\$153.75	\$582.75

### MFG-140 PRINCIPLES OF FLUID POWER, 3 CREDITS

Course provides students with instruction in the use of hydraulics and pneumatics in industry, covering the fundamentals of hydraulics, basic components (valves, cylinders, pumps, motors, piping, fluid, fluid conditions, and accessories).

**Recommended Prerequisites:** MTH-050

oc	<b>MFG-140-01</b>	<b>348009 TTH</b>			<b>1-4:50 PM</b>	
	J. TRAVER		\$390.00	\$39.00	\$153.75	\$582.75

### MFG-219 ROBOTICS, 3 CREDITS

An introduction to robotics and industrial motion control. Students will be exposed to the operation, programming and applications of a typical FANUC, six-axis industrial robot. Hands-on activities will include manual tech programming, testing with simulation software and programming of advanced movements.

**Recommended Prerequisites:** MFG-209 and MTH-050

oc	<b>MFG-219-01</b>	<b>344517 TTH</b>			<b>1-3:50 PM</b>	
	M. MATTSON		\$390.00	\$39.00	\$153.75	\$582.75

### MFG-221 MATERIALS SCIENCE, 3 CREDITS

Introduces metallurgy and material science. Extractive and physical metallurgy will be covered. Specific topics include heat treatment, materials analysis, the iron carbon phase diagram, composites, ceramics and industrial plastics.

**Recommended Prerequisites:** MTH-050

oc HYB	<b>MFG-221-01</b>	<b>344520 MW</b>			<b>5-7:50 PM</b>	
	M. BABCOCK		\$390.00	\$39.00	\$153.75	\$582.75

### MFG-273 MASTERCAM, LATHE, MILL, MULTI-AXIS, 4 CREDITS

This course covers the fundamentals of Mastercam lathe and mill/turn tool paths. It also provides demonstrations and exercises on new and current programming techniques for advanced mill/turn machining centers. Additional topics will include multi-axis documentation and set-up sheets.

**Recommended Prerequisites:** MFG-272 or prior experience

oc	<b>MFG-273-01</b>	<b>348010 TBA</b>				
	M. SNELL		\$520.00	\$52.00	\$205.00	\$777.00

### MFG-280 MANUFACTURING TECHNOLOGY/CWE, 1-6 CREDITS

Cooperative work experience. Practical experience in the manufacturing trades. Coordination of instruction will occur with industry and the manufacturing and cooperative work departments. May be repeated for up to 6 credits. Required: Student Petition.

**Corequisites:** CWE-281

Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

ONL **MFG-280-01** **344524**  
C. CONNORS \$780.00 \$78.00 \$75.00 \$933.00V  
Required: Student Petition. Contact: Mike Mattson at mattsonm@clackamas.edu or 503-594-3322. Corequisite: Take the following CWE-281-06.

### XMFG-0008 WORK SESSIONS: MAKERSPACE, 0 CREDIT

The de Asis Makerspace workshop where creative people from all walks of life can have access to the tools they will need to create prototypes, models and masterpieces. Participants will have the ability to use equipment ranging from basic woodworking machinery and 3-D printing to CNC milling, plasma and laser.

oc	<b>XMFG-0008-01</b>	<b>344757 F</b>			<b>5-8:50 PM</b>	
	C. CONNORS		\$0.00	\$0.00	\$0.00	\$0.00
	Meets: 4/3.					
oc	<b>XMFG-0008-02</b>	<b>344758 F</b>			<b>5-8:50 PM</b>	
	C. CONNORS		\$0.00	\$0.00	\$0.00	\$0.00
	Meets: 4/10.					
oc	<b>XMFG-0008-03</b>	<b>344760 F</b>			<b>5-8:50 PM</b>	
	C. CONNORS		\$0.00	\$0.00	\$0.00	\$0.00
	Meets: 4/17.					
oc	<b>XMFG-0008-04</b>	<b>344761 F</b>			<b>5-8:50 PM</b>	
	C. CONNORS		\$0.00	\$0.00	\$0.00	\$0.00
	Meets: 4/24.					
oc	<b>XMFG-0008-05</b>	<b>344763 F</b>			<b>5-8:50 PM</b>	
	C. CONNORS		\$0.00	\$0.00	\$0.00	\$0.00
	Meets: 5/1.					
oc	<b>XMFG-0008-06</b>	<b>344764 F</b>			<b>5-8:50 PM</b>	
	C. CONNORS		\$0.00	\$0.00	\$0.00	\$0.00
	Meets: 5/8.					
oc	<b>XMFG-0008-07</b>	<b>344766 F</b>			<b>5-8:50 PM</b>	
	C. CONNORS		\$0.00	\$0.00	\$0.00	\$0.00
	Meets: 5/15.					
oc	<b>XMFG-0008-08</b>	<b>344767 F</b>			<b>5-8:50 PM</b>	
	C. CONNORS		\$0.00	\$0.00	\$0.00	\$0.00
	Meets: 5/22.					
oc	<b>XMFG-0008-09</b>	<b>344768 F</b>			<b>5-8:50 PM</b>	
	C. CONNORS		\$0.00	\$0.00	\$0.00	\$0.00
	Meets: 5/29.					
oc	<b>XMFG-0008-10</b>	<b>344770 F</b>			<b>5-8:50 PM</b>	
	C. CONNORS		\$0.00	\$0.00	\$0.00	\$0.00
	Meets: 6/5.					
oc	<b>XMFG-0008-11</b>	<b>344771 F</b>			<b>5-8:50 PM</b>	
	C. CONNORS		\$0.00	\$0.00	\$0.00	\$0.00
	Meets: 6/12.					

## Mathematics

### MTH-020 FUNDAMENTALS OF ARITHMETIC II, 4 CREDITS

**Campus Locations:**  
**HAR:** Harmony Community Campus  
**OC:** Oregon City Campus  
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**ESPAÑOL:** Enseñado en español  
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Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

This second course in arithmetic is a prerequisite for the three math pathways. It reviews mathematical foundations such as fractions, percents, geometry, and effective study skills.

**Prerequisites:** MTH-010 with a C or better, or placement in MTH-020

ONL NCT	<b>MTH-020-02</b>	<b>344511</b>				
	TBA		\$520.00	\$52.00	\$20.00	\$592.00
	Meets: 4/13-6/13.					

#### MTH-020ES FUNDAMENTOS DE ARITMÉTICA II, 4 CREDITS

Este segundo curso de aritmética es un requisito previo para las tres vías de matemáticas. Revisa fundamentos matemáticos como fracciones, porcentajes, geometría y habilidades de estudio efectivas.

**Prerequisites:** MTH-010 con una C o mejor, o ubicación en MTH-020

REM NCT ESPAÑOL	<b>MTH-020ES-01</b>	<b>344514 S</b>			<b>8-11:50 AM</b>	
	A. ARISTIZABAL		\$520.00	\$52.00	\$20.00	\$592.00
	Requerido: petición del estudiante.					

#### MTH-050 TECHNICAL MATHEMATICS I, 4 CREDITS

Designed for career-technical students. Topics focus on critical thinking, problem solving, and mathematical communication using applications of arithmetic, measurement, geometry, and statistics and probability.

**Prerequisites:** MTH-020 with a C or better, or placement in MTH-050 or higher

OC LCT	<b>MTH-050-01</b>	<b>344518 MW</b>			<b>1-2:50 PM</b>	
	M. CHASE		\$520.00	\$52.00	\$20.00	\$592.00
OC NCT	<b>MTH-050-02</b>	<b>344521 TTH</b>			<b>10-11:50 AM</b>	
	A. ARISTIZABAL		\$520.00	\$52.00	\$20.00	\$592.00

#### MTH-050ES MATEMÁTICAS TÉCNICAS I, 4 CREDITS

Este curso está diseñado para estudiantes de carreras técnicas. Los temas se centran en el pensamiento crítico, la resolución de problemas y la comunicación matemática utilizando aplicaciones de aritmética, mediciones, geometría, estadística y probabilidades.

**Prerequisites:** MTH-020 con una C o mejor, o ubicación en MTH-050 o superior

REM NCT ESPAÑOL	<b>MTH-050ES-01</b>	<b>344523 F</b>			<b>5-8:50 PM</b>	
	A. ARISTIZABAL		\$520.00	\$52.00	\$20.00	\$592.00

#### MTH-060 ALGEBRA I, 4 CREDITS

An introduction to the algebra sequence. This class starts from foundational skills of arithmetic to build a rich understanding of linear models. Variables are introduced to represent changing quantities in applications and are used in tables, graphs, expressions, equations, inequalities, and systems. Multiple algebraic representations and strategies are used both with and without technology.

**Prerequisites:** MTH-020 with a C or better, or placement in MTH-060

HAR NCT	<b>MTH-060-01</b>	<b>344526 MW</b>			<b>9-10:50 AM</b>	
	A. ARISTIZABAL		\$520.00	\$52.00	\$20.00	\$592.00
HAR NCT	<b>MTH-060-02</b>	<b>347995 TTH</b>			<b>6-7:50 PM</b>	
	K. PHILLIPS		\$520.00	\$52.00	\$20.00	\$592.00
OC NCT	<b>MTH-060-03</b>	<b>347996 MW</b>			<b>1-2:50 PM</b>	
	M. JOSI		\$520.00	\$52.00	\$20.00	\$592.00

#### MTH-065 ALGEBRA II, 4 CREDITS

**Campus Locations:**  
**HAR:** Harmony Community Campus  
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**ESPAÑOL:** Enseñado en español  
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Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

A second term in an algebra sequence, this course bridges foundational algebra skills to formal analysis of algebraic models. Linear and non-linear applications, including radical, absolute value, squaring, and polynomial relations are modeled graphically, numerically, and symbolically. Expressions, equations, and inequalities are utilized throughout. Multiple algebraic representations and strategies are used both with and without technology.

**Prerequisites:** MTH-060 with a C or better, or placement in MTH-065

HAR NCT	<b>MTH-065-01</b>	<b>344539 MW</b>			<b>9-10:50 AM</b>	
	A. ARISTIZABAL		\$520.00	\$52.00	\$20.00	\$592.00
HAR NCT	<b>MTH-065-02</b>	<b>345558 TTH</b>			<b>6-7:50 PM</b>	
	K. PHILLIPS		\$520.00	\$52.00	\$20.00	\$592.00
OC NCT	<b>MTH-065-03</b>	<b>348095 TTH</b>			<b>10-11:50 AM</b>	
	A. HALL		\$520.00	\$52.00	\$20.00	\$592.00
OC NCT	<b>MTH-065-04</b>	<b>348096 MW</b>			<b>3-4:50 PM</b>	
	A. HALL		\$520.00	\$52.00	\$20.00	\$592.00

#### MTH-080 TECHNICAL MATHEMATICS II, 3 CREDITS

This course is the second in a sequence designed for career-technical students. The topics focus on critical thinking, problem solving, and mathematical communication using applications in arithmetic, algebra, geometry, and trigonometry.

**Prerequisites:** MTH-050 with a C or better, or placement in MTH-080

OC NCT	<b>MTH-080-01</b>	<b>344556 MW</b>			<b>1-2:20 PM</b>	
	B. WEBBER		\$390.00	\$39.00	\$20.00	\$449.00

#### MTH-095 ALGEBRA III, 4 CREDITS

This course focuses on foundational skills and ways of thinking that prepare a student for future STEM coursework. Linear, quadratic, and rational relations are approached through applications with a strong emphasis on modeling as a problem-solving technique. Multiple algebraic representations and strategies are used both with and without technology.

**Prerequisites:** MTH-065 with a C or better, or placement in MTH-095

HAR NCT	<b>MTH-095-01</b>	<b>344560 TTH</b>			<b>6-7:50 PM</b>	
	M. HUNTER		\$520.00	\$52.00	\$20.00	\$592.00
OC NCT	<b>MTH-095-02</b>	<b>344564 MW</b>			<b>10-11:50 AM</b>	
	M. CHASE		\$520.00	\$52.00	\$20.00	\$592.00
OC NCT	<b>MTH-095-03</b>	<b>345559 MW</b>			<b>3-4:50 PM</b>	
	A. ARISTIZABAL		\$520.00	\$52.00	\$20.00	\$592.00
OC NCT	<b>MTH-095-04</b>	<b>347994 TTH</b>			<b>10-11:50 AM</b>	
	J. HEVEL		\$520.00	\$52.00	\$20.00	\$592.00

#### MTH-098 COLLEGE MATH FOUNDATIONS, 4 CREDITS

In our society, we see and hear about important topics and trends that involve numbers. In this class, participants work to understand and communicate what these numbers mean. Students will explore ways they interact with quantitative information in daily life, learn to effectively interpret and communicate quantitative information, and apply their own knowledge and experience to quantitative reasoning. Learning happens in small student groups, with technology, and through reflective writing. The class is project-based, meaning that students complete projects to demonstrate what they have learned.

**Prerequisites:** MTH-020 with a C or better, or placement in MTH-050, MTH-060, or MTH-098

OC HYB NCT	<b>MTH-098-01</b>	<b>344568 MW</b>			<b>10-11:20 AM</b>	
	M. JOSI		\$520.00	\$52.00	\$20.00	\$592.00
OC HYB NCT	<b>MTH-098-02</b>	<b>344572 MW</b>			<b>1-2:20 PM</b>	
	M. PRICE		\$520.00	\$52.00	\$20.00	\$592.00
ONL NCT	<b>MTH-098-10</b>	<b>344577</b>				
	E. KELLY		\$520.00	\$52.00	\$20.00	\$592.00



Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total	Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total
		Instructor		Tuition	Fee	Crs. Fee			Instructor		Tuition	Fee	Crs. Fee
<b>MTH-105Z MATH IN SOCIETY, 4 CREDITS</b>							OC NCT	<b>MTH-112Z-01 344607 MW</b>	F. CARTER	\$520.00	\$52.00	\$20.00	\$592.00
An exploration of present-day applications of mathematics focused on developing numeracy. Major topics include quantitative reasoning and problem-solving strategies, probability and statistics, and financial mathematics; these topics are to be weighted approximately equally. This course emphasizes mathematical literacy and communication, relevant everyday applications, and the appropriate use of current technology.							OC NCT	<b>MTH-112Z-02 344611 TTH</b>	M. HAUGEN	\$520.00	\$52.00	\$20.00	\$592.00
<b>Prerequisites:</b> MTH-095 or MTH-098 with a C or better, or placement in MTH-111Z							OC HYB NCT	<b>MTH-112Z-10 344612 TBA</b>	M. HAUGEN	\$520.00	\$52.00	\$20.00	\$592.00
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z							This is an online section that meets for in-person and testing dates only.						
OC HYB NCT	<b>MTH-105Z-01 344580 TTH</b>	E. MEUSER	\$520.00	\$52.00	\$20.00	\$592.00	<b>MTH-213 FUNDAMENTALS OF ELEMENTARY MATH III, 4 CREDITS</b>						
OC HYB NCT	<b>MTH-105Z-02 344586 MW</b>	S. VALDES	\$520.00	\$52.00	\$20.00	\$592.00	A course designed to teach students to understand the basic concepts of mathematics and provide ideas for teaching these concepts to elementary school children. Focuses on geometry, measurement, geometric mapping, probability, and counting techniques. MTH-212 and MTH-213 can be taken in any order.						
OC HYB NCT	<b>MTH-105Z-03 344588 MW</b>	S. VALDES	\$520.00	\$52.00	\$20.00	\$592.00	<b>Prerequisites:</b> MTH-211						
ONL NCT	<b>MTH-105Z-10 344590</b>	M. YANNOTTA	\$520.00	\$52.00	\$20.00	\$592.00	<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z						
ONL NCT	<b>MTH-105Z-11 344592</b>	M. YANNOTTA	\$520.00	\$52.00	\$20.00	\$592.00	OC NCT	<b>MTH-213-15 345560 TTH</b>	S. VALDES	\$520.00	\$52.00	\$20.00	\$592.00
<b>MTH-111Z PRECALCULUS I: FUNCTIONS, 4 CREDITS</b>							<b>MTH-244 STATISTICS II, 4 CREDITS</b>						
A course primarily designed for students preparing for trigonometry or calculus. This course focuses on functions and their properties, including polynomial, rational, exponential, logarithmic, piecewise-defined, and inverse functions. These topics will be explored symbolically, numerically, and graphically in real-life applications and interpreted in context. This course emphasizes skill building, problem solving, modeling, reasoning, communication, connections with other disciplines, and the appropriate use of present-day technology.							The tools learned in Statistics I are purposed for inference of data via the use of hypothesis tests and confidence intervals for both one and two populations, linear regression, and chi-square tests.						
<b>Prerequisites:</b> MTH-095 with a C or better, or placement in MTH-111Z							<b>Prerequisites:</b> STAT-243Z with a C or better						
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z							<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z						
OC NCT	<b>MTH-111Z-01 344594 TTH</b>	K. AMREIN	\$520.00	\$52.00	\$20.00	\$592.00	OC NCT	<b>MTH-244-01 344618 MW</b>	T. BIEBER	\$520.00	\$52.00	\$20.00	\$592.00
OC NCT	<b>MTH-111Z-02 344601 TTH</b>	E. MEUSER	\$520.00	\$52.00	\$20.00	\$592.00	<b>MTH-251Z DIFFERENTIAL CALCULUS, 4 CREDITS</b>						
OC NCT	<b>MTH-111Z-03 344603 MW</b>	B. WEBBER	\$520.00	\$52.00	\$20.00	\$592.00	This course explores limits, continuity, derivatives, and their applications for real-valued functions of a single variable. These topics will be explored graphically, numerically, and symbolically in real-life applications. This course emphasizes abstraction, problem-solving, modeling, reasoning, communication, connections with other disciplines, and the appropriate use of technology.						
OC NCT	<b>MTH-111Z-04 344605 MW</b>	K. PHILLIPS	\$520.00	\$52.00	\$20.00	\$592.00	<b>Prerequisites:</b> MTH-112Z with a C or better, or placement in MTH-251Z						
OC HYB NCT	<b>MTH-111Z-10 344606 TBA</b>	F. CARTER	\$520.00	\$52.00	\$20.00	\$592.00	<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z						
This is an online section that meets for mandatory in-person orientation and testing dates only. Orientation: 4/1, 6-7pm or 4/2, 1-2pm. Week 3 Exam: 4/15, 6-8pm or 4/16, 1-3pm. Week 7 Exam: 5/13, 6-8pm or 5/14, 1-3pm. Final Exam: 6/10, 6-8pm or 6/11, 1-3pm.							OC NCT	<b>MTH-251Z-01 344620 MW</b>	M. PRICE	\$520.00	\$52.00	\$20.00	\$592.00
<b>MTH-112Z PRECALCULUS II: TRIGONOMETRY, 4 CREDITS</b>							OC NCT	<b>MTH-251Z-02 344623 TTH</b>	M. PRICE	\$520.00	\$52.00	\$20.00	\$592.00
A course primarily designed for students preparing for calculus and related disciplines. This course explores trigonometric functions and their applications as well as the language and measurement of angles, triangles, circles, and vectors. These topics will be explored symbolically, numerically, and graphically in real-life applications and interpreted in context. This course emphasizes skill building, problem solving, modeling, reasoning, communication, connections with other disciplines, and the appropriate use of present-day technology.							<b>MTH-252Z INTEGRAL CALCULUS, 4 CREDITS</b>						
<b>Prerequisites:</b> MTH-111Z with a C or better, or placement in MTH-112Z							This course explores Riemann sums, definite integrals, and indefinite integrals for real-valued functions of a single variable. These topics will be explored graphically, numerically, and symbolically in real-life applications. This course emphasizes abstraction, problem-solving, modeling, reasoning, communication, connections with other disciplines, and the appropriate use of technology.						
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z							<b>Prerequisites:</b> MTH-251Z with a C or better						
<b>MTH-112Z PRECALCULUS II: TRIGONOMETRY, 4 CREDITS</b>							<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z						
A course primarily designed for students preparing for calculus and related disciplines. This course explores trigonometric functions and their applications as well as the language and measurement of angles, triangles, circles, and vectors. These topics will be explored symbolically, numerically, and graphically in real-life applications and interpreted in context. This course emphasizes skill building, problem solving, modeling, reasoning, communication, connections with other disciplines, and the appropriate use of present-day technology.							OC NCT	<b>MTH-252Z-01 344625 MW</b>	M. PARTNOF	\$520.00	\$52.00	\$20.00	\$592.00
<b>Prerequisites:</b> MTH-111Z with a C or better, or placement in MTH-112Z							OC NCT	<b>MTH-252Z-02 344631 TTH</b>	M. PARTNOF	\$520.00	\$52.00	\$20.00	\$592.00
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z							<b>MTH-253Z CALCULUS: SEQUENCES AND SERIES, 4 CREDITS</b>						

**Campus Locations:**  
**HAR:** Harmony Community Campus  
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**OFF:** Other Off-Campus Location

**Distance Education Notification:**  
**ONL:** Online Only  
**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

**Other Coding Translations:**  
**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total	Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total
		Instructor		Tuition	Fee	Crs. Fee			Instructor		Tuition	Fee	Crs. Fee
<p>This course explores real-valued sequences and series, including power and Taylor series. Topics include convergence and divergence tests and applications. These topics will be explored graphically, numerically, and symbolically. This course emphasizes abstraction, problem-solving, reasoning, communication, connections with other disciplines, and the appropriate use of technology.</p> <p><b>Prerequisites:</b> MTH-252Z with a C or better</p> <p><b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z</p>							<p>The focus of this course is to demonstrate appropriate blood specimen procurement techniques using vacutainer, syringe, 'winged infusion'/butterfly with syringe and capillary puncture methods and associated safety techniques. Other specifics of the blood specimen testing requirements, such as collection into the correct evacuated tube (additive), specimen handling procedures, collections of newborn screen and collection documentation are also covered; while assuring a safe, confidential and professional environment for the patient, and as the phlebotomy technician.</p> <p><b>Prerequisites:</b> MA-156, MA-156L, MA-160, MA-162, MA-162L, MA-164, MA-164L, and MA-168</p> <p><b>Corequisites:</b> MA-166, MA-174, MA-174L, MA-178, and MA-188</p> <p><b>Required:</b> Student must be enrolled in current Medical Assistant cohort</p>						
OC NCT	<b>MTH-253Z-01</b>	<b>344633 MW</b>				<b>3-4:50 PM</b>		<b>MA-166L-01</b>	<b>343653 TH</b>				<b>9-11:50 AM</b>
	S. PRUYN	\$520.00	\$52.00	\$20.00	\$592.00		J. ALLISON		TH	\$130.00	\$13.00	\$94.00	\$237.00
							S. PARKER						
							E. ZUNIGA						
							Meets: 3/30-4/30.						
<b>MTH-254</b>	<b>VECTOR CALCULUS, 5 CREDITS</b>												
<p>This course is an introduction to the study of vectors and analytic geometry in three-space, the calculus of vector-valued functions, and the calculus of several variables.</p> <p><b>Prerequisites:</b> MTH-252Z with a C or better</p>													
OC HYB	<b>MTH-254-01</b>	<b>344636 MW</b>				<b>1-2:50 PM</b>							
NCT	A. HALL	\$650.00	\$65.00	\$20.00	\$735.00								
<b>MTH-261</b>	<b>LINEAR ALGEBRA, 4 CREDITS</b>												
<p>This course is an introduction to linear analysis of n-space: systems of linear equations, vectors, matrices, matrix operations, linear transformations, linear independence, span, bases, subspaces, determinants, eigenvalues, eigenvectors, inner products, diagonalization, and applications of these topics.</p> <p><b>Prerequisites:</b> MTH-252Z with a C or better</p> <p><b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z</p>							<p><b>MA-174</b> <b>CLINICAL LAB PROCEDURES II, 1 CREDIT</b></p> <p>Designed to instill a basic understanding of simple, common laboratory terminology and procedures used in a general medical office laboratory to aid the physician in the diagnosis and treatment of disease. Laboratory safety, the prevention of blood born disease transmission and scope of practice will be emphasized. Continuation of the Clinical Laboratory Procedures series.</p> <p><b>Prerequisites:</b> MA-156, MA-156L, MA-160, MA-162, MA-162L, MA-164, MA-164L, and MA-168</p> <p><b>Corequisites:</b> MA-166, MA-166L, MA-174L, MA-178, and MA-188</p> <p><b>Required:</b> Student must be enrolled in current Medical Assistant cohort</p>						
OC NCT	<b>MTH-261-01</b>	<b>344637 TTH</b>				<b>1-2:50 PM</b>		<b>MA-174-01</b>	<b>343654</b>				
	M. HAUGEN	\$520.00	\$52.00	\$20.00	\$592.00		S. PARKER	\$130.00	\$13.00	\$50.00	\$193.00		
<b>Medical Assistant</b>													
<p>For more information, contact Health Sciences at <a href="mailto:healthsciences@clackamas.edu">healthsciences@clackamas.edu</a></p>													
<b>MA-100</b>	<b>INTRODUCTION TO MEDICAL ASSISTING, 2 CREDITS</b>						<b>MA-174L</b> <b>CLINICAL LAB PROCEDURES II LAB, 1 CREDIT</b>						
<p>Introduces the knowledge, skills, and attributes of a successful Medical Assistant while exploring the connection between patient experience and patient outcomes. Summarizes the clinical and employability skills required for providing clinical care while introducing content for career exploration.</p>							<p>This lab course is designed to instill a basic understanding of common laboratory terminology and procedures used in a general medical office laboratory to aid the physician in the diagnosis and treatment of the disease. Laboratory safety, the prevention of bloodborne disease transmission and scope of practice will be emphasized. Continuation of the Clinical Laboratory Procedures series.</p> <p><b>Prerequisites:</b> MA-156, MA-156L, MA-160, MA-162, MA-162L, MA-164, MA-164L, and MA-168</p> <p><b>Corequisites:</b> MA-166, MA-166L, MA-174, MA-178, and MA-188</p> <p><b>Required:</b> Student must be enrolled in current Medical Assistant cohort</p>						
ONL	<b>MA-100-01</b>	<b>343650</b>					<b>HAR</b>	<b>MA-174L-01</b>	<b>343655 T</b>				<b>9-11:50 AM</b>
	S. PARKER	\$260.00	\$26.00	\$0.00	\$286.00			T		\$130.00	\$13.00	\$0.00	\$143.00
								S. PARKER					
								Meets: 3/30-4/28.					
<b>MA-166</b>	<b>PHLEBOTOMY II, 1 CREDIT</b>						<b>MA-178</b> <b>MEDICAL ASSISTANT PRACTICUM, 7 CREDITS</b>						
<p>The focus of this course builds upon the foundational skills introduced in Phlebotomy I. The course will focus on advanced phlebotomy techniques such as blood specimen processing, techniques for syringe draws, collection into the correct evacuated tube (additive), specimen handling procedures, collections of newborn screen blood cultures, and advanced phlebotomy techniques.</p> <p><b>Prerequisites:</b> MA-156, MA-156L, MA-160, MA-162, MA-162L, MA-164, MA-164L, and MA-168</p> <p><b>Corequisites:</b> MA-166L, MA-174, MA-174L, MA-178, and MA-188</p> <p><b>Required:</b> Student must be enrolled in current Medical Assistant cohort</p>							<p>Under supervision within the ambulatory care setting, the student will apply both administrative and clinical knowledge and practices as attained within the medical assistant course curriculum.</p> <p><b>Prerequisites:</b> MA-156, MA-156L, MA-160, MA-162, MA-162L, MA-164, MA-164L, and MA-168</p> <p><b>Corequisites:</b> MA-166, MA-166L, MA-174, MA-174L, and MA-188</p> <p><b>Required:</b> Student must be enrolled in current Medical Assistant cohort</p>						
ONL	<b>MA-166-01</b>	<b>343652</b>					<b>HAR HYB</b>	<b>MA-178-01</b>	<b>344876 W</b>				<b>9-10:50 AM</b>
	E. ZUNIGA	\$130.00	\$13.00	\$250.00	\$393.00			S. PARKER		\$910.00	\$91.00	\$50.00	\$1,051.00
<b>MA-166L</b>	<b>PHLEBOTOMY II LAB, 1 CREDIT</b>												

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**ESPAÑOL:** Enseñado en español  
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Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
		Instructor							
<b>MA-188</b>	<b>CERTIFICATION EXAM REVIEW, 2 CREDITS</b>								
This course is a medical assistant study prep course designed to prepare students for their national credentialing examination.									
<b>Prerequisites:</b> MA-156, MA-156L, MA-160, MA-162, MA-162L, MA-164, MA-164L, and MA-168									
<b>Corequisites:</b> MA-166, MA-166L, MA-174, MA-174L, and MA-178									
<b>Required:</b> Student must be enrolled in current Medical Assistant cohort									
ONL	<b>MA-188-01</b>	<b>343656</b>							
	S. PARKER		\$260.00	\$26.00	\$0.00				\$286.00

## Medical Billing and Coding

<b>MBC-116</b>	<b>INSURANCE BILLING AND REIMBURSEMENT II, 4 CREDITS</b>								
This course will continue to discuss health insurance and insurance billing, with a focus on healthcare reimbursement. Students will practice the principles of accounts receivable management from claim submission and follow-up to posting payments received. Students will apply payments to patient accounts and track claims for correct payment. Legal and regulatory issues as they pertain to healthcare reimbursement are reviewed as well as the differences in reimbursement methods. Practical application of Insurance billing and Medical coding skills learned throughout the program via examinations and practice scenarios.									
<b>Prerequisites:</b> MBC-115 with a C or better									
<b>Required:</b> Medical Billing and Coding students only									
REM	<b>MBC-116-01</b>	<b>343657 M</b>					<b>6-9:00 PM</b>		
	C. GARNER		\$520.00	\$52.00	\$200.00				\$772.00

<b>MBC-125</b>	<b>ICD-10 CODING I, 2 CREDITS</b>								
This course will discuss fundamental medical coding skills for professional services, such as physicians, mid-level providers, etc., and how to apply them. The student will be introduced to the basics of diagnostic medical coding related to the International Classification of Diseases, Revision 10-Clinical Modification (ICD-10- CM) Code Set.									
<b>Prerequisites:</b> MBC-120 with a C or better									
<b>Corequisites:</b> MBC-126									
<b>Required:</b> Medical Billing and Coding students only									
ONL	<b>MBC-125-01</b>	<b>343658</b>							
	C. GARNER		\$260.00	\$26.00	\$200.00				\$486.00

<b>MBC-126</b>	<b>CPT/HCPCS CODING I, 4 CREDITS</b>								
This course reviews fundamental medical coding skills for professional services, such as physicians, mid-level providers, etc. The student will explore the basics of procedural medical coding related to the Current Procedural Terminology (CPT) and Healthcare Common Procedure Coding System (HCPCS) Code Sets.									
<b>Prerequisites:</b> MBC-120 with a C or better									
<b>Corequisites:</b> MBC-125									
<b>Required:</b> Medical Billing and Coding students only									
REM	<b>MBC-126-01</b>	<b>343659 W</b>					<b>6-9:00 PM</b>		
	C. GARNER		\$520.00	\$52.00	\$0.00				\$572.00

## Music

### MUP-102 WIND ENSEMBLE, 1 CREDIT

Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
		Instructor							
	For non-majors and music majors. Introduction and study of traditional and contemporary band literature. This course is taken each term in one's first year of a two-year course of study that includes performance, study of common styles and practices of historically and culturally significant composers/arrangers, and study of historical issues related to the development and performance of band literature. Provides a thorough groundwork in the fundamental ideas, techniques, and practices of band music and ensemble performance. No audition required. May be repeated for up to 3 credits.								
<b>Required:</b> Completion of high school or high school performance level. Ability to read music and play a band instrument									
OC NCT	<b>MUP-102-01</b>	<b>343694 TTH</b>					<b>3-4:30 PM</b>		
	L. CAMPBELL		\$130.00	\$13.00	\$0.00				\$143.00

### MUP-104 JAZZ COMBO, 1 CREDIT

Instrumental performing group concentrating on rock, pop, and contemporary styles in the small to medium-sized group setting. No audition required. May be repeated for up to 8 credits.									
<b>Recommended Prerequisites:</b> MUP-105									
OC NCT	<b>MUP-104-01</b>	<b>343695 M</b>					<b>12-12:50 PM</b>		
	C. DOGGETT		\$130.00	\$13.00	\$0.00				\$143.00

### MUP-105 JAZZ ENSEMBLE, 1 CREDIT

For non-majors and music majors. Introduction and study of common 'big-band' and small-group jazz styles. This course is taken each term in one's first year of a two-year course of study that includes performance, improvisation, musical arranging and writing, study of common styles and practices of historically and culturally significant jazz artists, and study of historical issues related to the development and performance of jazz music. May be repeated for up to 3 credits.									
<b>Recommended Prerequisites:</b> MUP-102									
OC NCT	<b>MUP-105-01</b>	<b>343698 MW</b>					<b>3-4:30 PM</b>		
	L. CAMPBELL		\$130.00	\$13.00	\$0.00				\$143.00

### MUP-122 VOCAL ENSEMBLE, 2 CREDITS

An introductory performance ensemble open to all students wishing to sing in a choral ensemble. Designed for non-majors and majors who need preparation for MUP-125.									
<b>Recommended:</b> A desire to sing in a large and fun ensemble. An interest in exploring the roots of American music									
OC LCT	<b>MUP-122-01</b>	<b>343701 TTH</b>					<b>3-4:50 PM</b>		
	K. HOLLINGSWORTH		\$260.00	\$26.00	\$52.00				\$338.00

### MUP-125 ADVANCED VOCAL ENSEMBLE, 2 CREDITS

An advanced vocal performance ensemble open by audition only. Open to majors and students with vocal experience, sight-reading ability. AVE will travel to perform and a minimum three-term commitment is highly encouraged. May be repeated for up to 6 credits.									
OC LCT	<b>MUP-125-01</b>	<b>343704 MW</b>					<b>3-4:50 PM</b>		
	K. HOLLINGSWORTH		\$260.00	\$26.00	\$52.00				\$338.00
Vocal placement required for private lessons and vocal ensembles. New students attend in Room N114 on 3/31 from 3-5 pm to demonstrate vocal range. Contact kathleen.hollingsworth@clackamas.edu with questions.									

### MUP-150 CONTEMPORARY MUSIC ENSEMBLE, 2 CREDITS

**Campus Locations:**  
**HAR:** Harmony Community Campus  
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**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
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Course No      Course Title, Credits							Course No      Course Title, Credits							
Section No	Crs Reg.	Days	Time				Section No	Crs Reg.	Days	Time				
Instructor		Tuition	Fee	Crs. Fee	Total		Instructor		Tuition	Fee	Crs. Fee	Total		
<p>This course is a performance ensemble open to all musicians who wish to play pop, rock, popular music. May be repeated for up to 12 credits.</p> <p><b>Required:</b> Pass proficiency audition</p>							<p>For non-majors and music majors. Introduction and study of common big-band and small-group jazz styles. This is the second year of a two-year course of study that includes performance, improvisation, musical arranging and writing, study of common styles and practices of historically and culturally significant jazz artists, and study of historical issues related to the development and performance of jazz music. May be repeated for up to 3 credits.</p> <p><b>Prerequisites:</b> MUP-105 (3 credits)</p>							
OC NCT	MUP-150-01	343705 MW		1-2:50 PM			OC NCT	MUP-205-01	343797 MW		3-4:30 PM			
	K. DEITZ	\$260.00	\$26.00	\$50.00	\$336.00			L. CAMPBELL	\$130.00	\$13.00	\$0.00	\$143.00		
	K. HOLLINGSWORTH Vocal placement required for private lessons and vocal ensembles. New students attend in Room N114 on 3/30 from 3-5 pm to demonstrate vocal range. Contact kathleen.hollingsworth@clackamas.edu with questions.													
<b>MUP-158 CHAMBER ENSEMBLE, 1 CREDIT</b>							<b>MUP-222 VOCAL ENSEMBLE, 2 CREDITS</b>							
Rehearsal and performance of traditional vocal and instrumental chamber music (one musician per part). Includes concerts and coaching by area professionals. Highly recommended for music majors. First of a two-part series. May be repeated for up to 8 credits.							Second year beginning vocal ensemble open to all students wishing to sing in a choral ensemble. Designed for non-majors and majors who need preparation for MUP-225. Performs various genres of vocal music. Emphasis on sight reading, basic vocal production and ensemble singing. May be repeated for up to 6 credits.							
OC NCT	MUP-158-01	343707 TH		1-2:50 PM			OC LCT	MUP-222-01	343799 TTH		3-4:50 PM			
	D. TUTMARK	\$130.00	\$13.00	\$85.00	\$228.00			K. HOLLINGSWORTH	\$260.00	\$26.00	\$52.00	\$338.00		
	Guitar Ensemble.							Vocal placement required for private lessons and vocal ensembles. New students attend in Room N114 on 3/31 from 3-5 pm to demonstrate vocal range. Contact kathleen.hollingsworth@clackamas.edu with questions.						
OC NCT	MUP-158-02	343711 T												
	G. HARRIS	\$130.00	\$13.00	\$85.00	\$228.00									
	Saxophone Quartet.													
OC NCT	MUP-158-03	343713 TBA												
	TBA	\$130.00	\$13.00	\$85.00	\$228.00									
	Brass Quintet.													
OC NCT	MUP-158-04	343714 TBA												
	TBA	\$130.00	\$13.00	\$85.00	\$228.00									
	Woodwind Quintet.													
<b>MUP-202 WIND ENSEMBLE, 1 CREDIT</b>							<b>MUP-225 ADVANCED VOCAL ENSEMBLE, 2 CREDITS</b>							
For non-majors and music majors. Introduction and study of traditional and contemporary band literature. This is the second year of a two-year course of study that includes performance, study of common styles and practices of historically and culturally significant composers/arrangers, and study of historical issues related to the development and performance of band literature. Provides a thorough groundwork in the fundamental ideas, techniques, and practices of band music and ensemble performance. No audition required. May be repeated for up to 6 credits.							Second year advanced vocal performance ensemble open by audition only. Open to majors and students with vocal experience, sight-reading ability. AVE will travel to perform, will record in the studio and a minimum three-term commitment is highly encouraged. May be repeated for up to 6 credits.							
<b>Required:</b> Completion of high school or high school performance level. Ability to read music and play a band instrument							<b>Prerequisites:</b> MUP-125 (6 credits)							
<b>Prerequisites:</b> MUP-102 (3 credits)														
OC NCT	MUP-202-01	343793 TTH		3-4:30 PM			OC LCT	MUP-225-01	343800 MW		3-4:50 PM			
	L. CAMPBELL	\$130.00	\$13.00	\$0.00	\$143.00			K. HOLLINGSWORTH	\$260.00	\$26.00	\$52.00	\$338.00		
								Vocal placement required for private lessons and vocal ensembles. New students attend in Room N114 on 3/31 from 3-5 pm to demonstrate vocal range. Contact kathleen.hollingsworth@clackamas.edu with questions.						
<b>MUP-204 JAZZ COMBO, 1 CREDIT</b>							<b>MUS-101 MUSIC FUNDAMENTALS, 3 CREDITS</b>							
Instrumental performing group concentrating on rock, pop, and contemporary styles in the small to medium-sized group setting. No audition required. May be repeated for up to 8 credits.							Introduction to fundamentals of reading and writing music. Designed for non-majors or majors needing substantial preparation for MUS-111.							
<b>Prerequisites:</b> MUP-104 (3 credits)							ONL NCT							
<b>Recommended Prerequisites:</b> MUP-105							MUS-101-01							
OC NCT	MUP-204-01	343794 M		12-12:50 PM				343900						
	C. DOGGETT	\$130.00	\$13.00	\$0.00	\$143.00			J. HEDBERG	\$390.00	\$39.00	\$10.00	\$439.00		
<b>MUP-205 JAZZ ENSEMBLE, 1 CREDIT</b>							<b>MUS-104 APPLIED MUSIC FUNDAMENTALS, 3 CREDITS</b>							
							The final sequence of a 3 course introduction to fundamentals of music theory. Designed for MPT/MT or AS Transfer students who need substantial preparation for MUS-111 and interested non-majors.							
							<b>Prerequisites:</b> MUS-103							
OC	MUS-104-01	343904 T		10-11:20 AM			oc	MUS-104-01	343904 T		10-11:20 AM			
		TH		10-11:20 AM					TH		10-11:20 AM			
	K. HOLLINGSWORTH	\$390.00	\$39.00	\$0.00	\$429.00			K. HOLLINGSWORTH	\$390.00	\$39.00	\$0.00	\$429.00		
<b>MUS-105 MUSIC APPRECIATION, 3 CREDITS</b>							<b>MUS-105 MUSIC APPRECIATION, 3 CREDITS</b>							
For non-majors and music majors. Emphasis on engaging in the study of instrumental and vocal musical genres from the ancient period through the contemporary music of our time. Includes critical analysis, study of elements, forms, styles, composers, performers, cultural, and historical issues and events.							For non-majors and music majors. Emphasis on engaging in the study of instrumental and vocal musical genres from the ancient period through the contemporary music of our time. Includes critical analysis, study of elements, forms, styles, composers, performers, cultural, and historical issues and events.							
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z							<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z							

**Campus Locations:**  
**HAR:** Harmony Community Campus  
**OC:** Oregon City Campus  
**WILS:** Wilsonville Training Center  
**OFF:** Other Off-Campus Location

**Distance Education Notification:**  
**ONL:** Online Only  
**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

**Other Coding Translations:**  
**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
**NCT:** No-Cost Text



Course No	Course Title, Credits					
	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time		
	Instructor		Tuition	Fee	Crs. Fee	Total
ONL	<b>MUS-105-01</b> 343907 J. HEDBERG		\$390.00	\$39.00	\$0.00	\$429.00

**MUS-107 INTRODUCTION TO AUDIO RECORDING I, 3 CREDITS**

Introduction to the basic techniques and tools used in audio recording. Areas of study include signal path, microphone applications, software, hardware, outboard gear, tracking, mixing, and editing.

OC LCT	<b>MUS-107-01</b> 343912 M D. BADSTUBNER		\$390.00	\$39.00	\$99.00	\$528.00
					6:30 -9:20 PM	

**MUS-108 INTRODUCTION TO AUDIO RECORDING II, 3 CREDITS**

Exploration of techniques and tools used in audio recording. Analog, digital, and hard drive recording will be explored. Areas of study include multi-tracking, signal path, microphone applications, software, hardware, outboard gear, soldering techniques, tracking, mixing, and editing. Software/hardware includes ProTools, ADAT, Mackie, etc.

**Prerequisites:** MUS-107

OC LCT	<b>MUS-108-01</b> 343917 T D. BADSTUBNER		\$390.00	\$39.00	\$99.00	\$528.00
					6:30 -9:20 PM	
OC LCT	<b>MUS-108-02</b> 348073 M D. BADSTUBNER		\$390.00	\$39.00	\$99.00	\$528.00
					1-3:50 PM	

**MUS-109 INTRODUCTION TO AUDIO RECORDING III, 3 CREDITS**

Exploration of digital recording/editing software and production of CD project. Advanced exploration of techniques and tools used in audio recording. Areas of study include signal path, microphone applications, software, hardware, outboard gear, tracking, mixing, and editing. Analog, digital, and hard drive recording will be explored. Software/hardware includes ProTools, ADAT, Mackie, etc.

**Prerequisites:** MUS-108

OC LCT	<b>MUS-109-01</b> 343920 T D. BADSTUBNER		\$390.00	\$39.00	\$99.00	\$528.00
					6:30 -9:20 PM	
OC LCT	<b>MUS-109-02</b> 348074 M D. BADSTUBNER		\$390.00	\$39.00	\$99.00	\$528.00
					1-3:50 PM	

**MUS-113 MUSIC THEORY I, 3 CREDITS**

For non-majors and music majors. Presents the diatonic and chromatic structure of tonal music in theory from the common practice period through written exercises, compositions, listening, and analysis. This is the third term of a three-term sequence, which includes chord progressions, use of triad inversions, seventh chords, secondary harmony, tonicization, and modulation to closely related keys.

**Prerequisites:** MUS-112

**Corequisites:** MUS-113L, MUS-116, and MUS-129 for AS in music degree seekers. This requirement does not affect non-music majors or MPT Majors

OC LCT	<b>MUS-113-01</b> 343923 TTH R. OLASON		\$390.00	\$39.00	\$0.00	\$429.00
					10-11:20 AM	

**MUS-113L MUSIC NOTATION SOFTWARE I, 1 CREDIT**

Continues an introduction to Finale (music notation software) on Macintosh computers.

OC LCT	<b>MUS-113L-01</b> 343925 M K. HOLLINGSWORTH		\$130.00	\$13.00	\$44.00	\$187.00
					10-11:50 AM	

**MUS-116 AURAL SKILLS I, 2 CREDITS**

Third of three courses in a year-long sequence. Diatonic sight singing in major keys using solfège syllables and moveable 'do'. Melodic dictation and aural recognition of intervals, triads, and 7th chords.

Course No	Course Title, Credits					
	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time		
	Instructor		Tuition	Fee	Crs. Fee	Total
<b>Corequisites:</b> MUS-113 <b>Prerequisites:</b> MUS-115						
OC LCT	<b>MUS-116-01</b> 343927 TTH R. OLASON		\$260.00	\$26.00	\$0.00	\$286.00
					1-1:50 PM	

**MUS-129 KEYBOARD SKILLS I, 2 CREDITS**

Develops basic keyboard skills required for study of tonal harmony and various musical activities such as vocal and instrumental rehearsals, music education and composition.

**Corequisites:** MUS-113, MUS-113L, and MUS-116

**Prerequisites:** MUS-128

OC LCT	<b>MUS-129-01</b> 343929 TTH R. OLASON		\$260.00	\$26.00	\$10.00	\$296.00
					2-2:50 PM	

**MUS-133 GROUP PIANO: PIANO FOR PLEASURE, 1 CREDIT**

Third of three courses in a year-long sequence. Beginning classroom piano instruction for non-music majors. Includes reading, theory, technical exercises, and the opportunity to share your music with others. Beginning to intermediate level.

OC LCT	<b>MUS-133-01</b> 343930 TTH T. STOJANOVIC		\$130.00	\$13.00	\$85.00	\$228.00
					9-9:50 AM	

**MUS-137 GROUP GUITAR I, 1 CREDIT**

For beginning to intermediate players. Covers finger picking, lead guitar, rock and popular styles, music reading, and music theory. Students provide own instrument.

OC LCT	<b>MUS-137-01</b> 343931 TH D. TUTMARK		\$130.00	\$13.00	\$85.00	\$228.00
					10-11:50 AM	

**MUS-138 GROUP GUITAR II, 1 CREDIT**

For intermediate to advanced players. Covers finger picking, lead guitar, rock and popular styles, music reading, and music theory. Students provide their own instrument.

**Prerequisites:** MUS-137

OC LCT	<b>MUS-138-01</b> 343934 TH D. TUTMARK		\$130.00	\$13.00	\$85.00	\$228.00
					10-11:50 AM	

**MUS-143 INTRODUCTION TO ELECTRONIC MUSIC II: SEQUENCING, AUDIO LOOPING, SOUND EFX, 3 CREDITS**

An introduction to digital audio in the MIDI environment. This course continues MIDI sequencing, and integrates audio into the MIDI environment with audio looping, and spotting sound effects. Uses common production software/hardware.

**Prerequisites:** MUS-142

OC NCT	<b>MUS-143-01</b> 343938 TH A. HAAK		\$390.00	\$39.00	\$99.00	\$528.00
					1-3:50 PM	

**MUS-144 INTRODUCTION TO ELECTRONIC MUSIC III: DIGITAL AUDIO, 3 CREDITS**

Exploration of digital music recording and editing, synthesis, sampling, and sequencing. Presents CD/audio file production techniques integrating digital audio with the MIDI sequence. Uses Pro Tools, and other common production software/hardware.

**Prerequisites:** MUS-143

OC NCT	<b>MUS-144-01</b> 343939 TH A. HAAK		\$390.00	\$39.00	\$99.00	\$528.00
					1-3:50 PM	

**MUS-145 LOCATION AUDIO, LIVESTREAMING, AND ADVANCED AUDIO EDITING TECHNIQUES, 3 CREDITS**

**Campus Locations:**  
**HAR:** Harmony Community Campus  
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**Distance Education Notification:**  
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**HYB:** In-person plus online work

**Other Coding Translations:**  
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**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
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Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

A look at onsite audio, both for recording as well as for broadcast, with an additional segment on more advanced audio editing techniques (can be taken in 1-credit segments; see MUS-150, MUS-151, and MUS-152).

OC LCT	MUS-145-01	343940 W			6:30 -9:20 PM	
	D. BADSTUBNER		\$390.00	\$39.00	\$99.00	\$528.00

#### MUS-147 MUSIC, SOUND & MOVIE MAKING, 1 CREDIT

Presents the basic components of designing, shooting, recording audio, and post production of movies as well as the history and theory that has led to contemporary film production.

OC	MUS-147-01	347974 F			6:30 -8:20 PM	
	B. ROSE	S	\$130.00	\$13.00	9-5:50 PM	\$242.00
	Meets: 5/1 & 5/2.					

#### MUS-150 LOCATION, LIVE, AND DIALOGUE SOUND RECORDING, 1 CREDIT

Through hands-on and practical situational experience, students will be introduced to recording audio in a non-traditional studio environment. Concepts will include live concert documentation, field/location recording, and dialogue recording.

**Prerequisites:** MUS-107

OC	MUS-150-01	343944 W			6:30 -9:20 PM	
	M. BAIRD		\$130.00	\$13.00	\$0.00	\$143.00
	Meets: 4/29-5/13 and in final week.					

#### MUS-151 VIDEO AND AUDIO FOR LIVESTREAM, 1 CREDIT

Utilizing Open Broadcast Software and professional audio equipment, students will learn to use and manipulate video and audio for live internet broadcasts.

OC	MUS-151-01	343945 W			6:30 -9:20 PM	
	B. WAGER		\$130.00	\$13.00	\$0.00	\$143.00
	Meets: 4/8-4/22 and in final week.					

#### MUS-152 ADVANCED AUDIO EDITING TECHNIQUES, 1 CREDIT

Additional advanced training in Pro Tools audio software techniques. The student will learn techniques in audio editing using warp audio, Beat Detective, and other plug-ins not covered in the MUS-107 through MUS-109 series.

**Prerequisites:** MUS-107 or MUS-143 or equivalent

OC	MUS-152-01	343946 W			6:30 -9:20 PM	
	D. BADSTUBNER		\$130.00	\$13.00	\$0.00	\$143.00
	Meets: 5/20-6/10.					

#### MUS-161 SONGWRITING II, 2 CREDITS

This course is a continuation of MUS-160. Further explores the elements of songwriting, focuses on creating a digital composition portfolio and public performance.

OC LCT	MUS-161-01	343948 T			1-2:50 PM	
	L. POLLARD		\$260.00	\$26.00	\$50.00	\$336.00

#### MUS-170 INTRODUCTION TO SCORING MUSIC FOR MEDIA, 2 CREDITS

Introduction to the analysis, writing, and production of basic film, video, and/or video game music scores and spotting music cues.

**Prerequisites:** MUS-102 or MUS-112 or MUS-143

OC LCT	MUS-170-01	343949 W			10-11:50 AM	
	M. BAIRD		\$260.00	\$26.00	\$0.00	\$286.00

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Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

#### MUS-188 PERFORMANCE ATTENDANCE, 0 CREDIT

The student is expected to attend a minimum of five live performances approved by the Music Department for each term registered.

OC NCT	MUS-188-01	343951 T			12-12:50 PM	
	L. CAMPBELL		\$0.00	\$0.00	\$0.00	\$0.00
	Find free on-campus performances for students at clackamasmusic.eventbrite.com.					

#### MUS-189 PERFORMANCE & REPERTOIRE, 1 CREDIT

A performance forum required for all students studying a classical instrument or voice at the MUP-171 to MUP-191 and MUP-271 to MUP-291 levels. Through weekly performance and critique, each student will develop proper stage manners and prepare for the end of term performance jury, and will also study the work to be performed through academic research. Students will have an opportunity to work with a professional accompanist. May be repeated for up to 6 credits. Required: Student Petition.

OC LCT	MUS-189-01	343953 W			12-12:50 PM	
	J. ISRAELS		\$130.00	\$13.00	\$0.00	\$143.00
	B. MICHAEL					

#### MUS-205 MUSIC LITERATURE: HISTORY OF JAZZ, 4 CREDITS

For non-majors and music majors. Emphasis on engaging in the study of Jazz music and surrounding cultural/historical issues. Includes critical analysis, study of elements, forms, styles, composers, performers, cultural, and historical issues and events.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

ONL	MUS-205-01	347970				
	L. CAMPBELL		\$520.00	\$52.00	\$0.00	\$572.00

#### MUS-206 MUSIC LITERATURE: HISTORY OF ROCK, 4 CREDITS

For non-majors and music majors. Emphasis on engaging in the study of Rock music and surrounding cultural/historical issues. Includes critical analysis, study of elements, forms, styles, composers, performers, cultural, and historical issues and events. An examination of Rock music as a contemporary social medium.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

OC NCT	MUS-206-01	343955 MW			10-11:50 AM	
	K. DEITZ		\$520.00	\$52.00	\$0.00	\$572.00
ONL NCT	MUS-206-02	343958				
	J. HEDBERG		\$520.00	\$52.00	\$0.00	\$572.00

#### MUS-209 ADVANCED AUDIO RECORDING & MIXING III: MIXING & MASTERING CAPSTONE, 3 CREDITS

This course will address applications of modern Mixing and Mastering Techniques. Topics include signal processing such as EQ, compression, modulation, time-based effects, and limiting. Additional topics include parallel processing, effective gain staging, automation, and creative problem-solving. These topics will be reinforced by the introduction to the concepts of how to listen to mixes and masters, translation to different music systems and environments, expectations and professional loudness standards of the deliverables, mastering in the mix, mastering with AI, and mastering with a human engineer. The student will compile a capstone portfolio of productions that they have developed throughout MUS-207, MUS-208, and MUS-209.

**Prerequisites:** MUS-109

**Recommended Prerequisites:** MUS-207 and MUS-208

OC	MUS-209-01	347971 TH			6:30 -9:20 PM	
	D. BADSTUBNER		\$390.00	\$39.00	\$0.00	\$429.00

#### MUS-213 MUSIC THEORY II, 3 CREDITS

Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

For non-majors and music majors. Continuation of the study of harmony, period styles after the 18th century through written exercises, compositions, listening, and analysis. This is the third term of a three-term sequence, which includes the 19th and 20th century idioms such as Romanticism, impressionism, post-Romanticism, and serialism.

**Prerequisites:** MUS-212

**Corequisites:** MUS-216 and MUS-226

oc	<b>MUS-213-01</b>	<b>343959 MW</b>			<b>10-11:20 AM</b>	
	R. OLASON		\$390.00	\$39.00	\$269.00	\$698.00

### MUS-216 KEYBOARD SKILLS II, 2 CREDITS

Third course in the sequential second year of advanced keyboard applications covering the materials of diatonic and chromatic music.

**Corequisites:** MUS-213

**Prerequisites:** MUS-215

OC LCT	<b>MUS-216-01</b>	<b>343960 MW</b>			<b>2-2:50 PM</b>	
	R. OLASON		\$260.00	\$26.00	\$85.00	\$371.00

### MUS-220 MPT SEMINAR III, 1 CREDIT

Third in a three-part series. For second year Music Performance and Technology AAS students only. Seminar will cover writing, arranging, production, performance and music theory through experiential learning. Students will produce, write and arrange for each CME/Songwriters concert and will produce the Annual MPT/Garage Band Festival each spring.

**Prerequisites:** MUS-219

oc	<b>MUS-220-01</b>	<b>343963 M</b>			<b>12-12:50 PM</b>	
	K. HOLLINGSWORTH		\$130.00	\$13.00	\$0.00	\$143.00
	Field Trip TBA.					

### MUS-226 AURAL SKILLS II, 2 CREDITS

Third of three courses in a year-long sequence. Diatonic and chromatic sight singing with solfège syllables and moveable 'do'. Four-part dictation including all chromatic devices studied in Theory II.

**Corequisites:** MUS-213

**Prerequisites:** MUS-225

OC LCT	<b>MUS-226-01</b>	<b>343964 MW</b>			<b>1-1:50 PM</b>	
	R. OLASON		\$260.00	\$26.00	\$85.00	\$371.00

### MUS-244 ADVANCED ELECTRONIC MUSIC III: PRODUCTION CAPSTONE, 3 CREDITS

Students will assemble a portfolio emphasizing their unique production techniques, abilities, and aesthetics. Utilizing experience and knowledge gained from the previous class sections, students will maintain ongoing music projects that will be reviewed and revised. There will be emphasis on aesthetic topics referencing industry trends. The class focus will be on analysis, critical listening, peer review, mixing and mastering, and production techniques.

**Prerequisites:** MUS-144

oc	<b>MUS-244-01</b>	<b>347972 T</b>			<b>4-6:50 PM</b>	
	M. BAIRD		\$390.00	\$39.00	\$0.00	\$429.00

### MUS-280 MUSIC/CWE, 2-6 CREDITS (VAR)

Cooperative work experience. Provides students with on-the-job work experience in the field of music. Required: Student Petition.

**Corequisites:** CWE-281

**Prerequisites:** MUS-107, MUS-140, and MUS-142

Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

OC NCT	<b>MUS-280-01</b>	<b>343965</b>				
	C. DOGGETT		\$780.00	\$78.00	\$144.00	\$1,002.00V
	Required: Student Petition. Corequisite: Take the following					
	CWE-281-06.					

OC NCT	<b>MUS-280-02</b>	<b>343967</b>				
	G. HARRIS		\$780.00	\$78.00	\$144.00	\$1,002.00V
	Required: Student Petition. Corequisite: Take the following					
	CWE-281-06.					

### XMUP-0001 UNISTUS CHOIR, 0 CREDIT

Select vocal ensemble which rehearses and performs choral music from the Renaissance to the 20th century, including the music of Estonia. Provides preparation for entering professional fields of music and performance. Emphasis on a cappella singing applied to appropriate chamber music. Provides an environment whereby individual students, selected according to their talents and attitudes, may assist the group at large in achieving its full potential which is that of excellence in choral expression. The achievement of this potential is our goal. By audition.

OC LCT	<b>XMUP-0001-01</b>	<b>343991 M</b>			<b>6:30 -9:20 PM</b>	
	L. CLINE		\$0.00	\$0.00	\$0.00	\$0.00

## Music: Individual Lessons - Non-Music Majors

### MUP-100 INDIVIDUAL LESSONS: NON-MUSIC MAJORS, 1 CREDIT

Private lessons for beginners, non-music majors, and students who receive a low rating in MUP-171 through MUP-191 auditions. Brass, woodwind, percussion, string and keyboard instruments, and voice. May be repeated for up to 12 credits. Required: Student Petition.

OC NCT	<b>MUP-100-01</b>	<b>343660 TBA</b>				
	K. POLITZER		\$130.00	\$13.00	\$225.00	\$368.00
	Required: Student Petition. Jazz Piano Lessons.					

OC NCT	<b>MUP-100-02</b>	<b>343661 TBA</b>				
	Y. MIYAMA		\$130.00	\$13.00	\$225.00	\$368.00
	Required: Student Petition. Piano Lessons.					

OC NCT	<b>MUP-100-03</b>	<b>343662 TBA</b>				
	D. FLESHNER		\$130.00	\$13.00	\$225.00	\$368.00
	Required: Student Petition. Rock, Blues, and Pop Piano Lessons.					

OC NCT	<b>MUP-100-04</b>	<b>343663 TBA</b>				
	J. ISRAELS		\$130.00	\$13.00	\$225.00	\$368.00
	Required: Student Petition. Voice Lessons. Vocal placement required for private lessons and vocal ensembles. New students attend in Room N114 on 3/31 from 3-5 pm to demonstrate vocal range. Contact kathleen.hollingsworth@clackamas.edu with questions.					

OC NCT	<b>MUP-100-05</b>	<b>343664 TBA</b>				
	B. MICHAEL		\$130.00	\$13.00	\$225.00	\$368.00
	Required: Student Petition. Voice Lessons. Vocal placement required for private lessons and vocal ensembles. New students attend in Room N114 on 3/31 from 3-5 pm to demonstrate vocal range. Contact kathleen.hollingsworth@clackamas.edu with questions.					

OC NCT	<b>MUP-100-06</b>	<b>343665 TBA</b>				
	D. D'AIGLE		\$130.00	\$13.00	\$225.00	\$368.00
	Required: Student Petition. Violin Lessons.					

OC NCT	<b>MUP-100-07</b>	<b>343666 TBA</b>				
	B. LEE		\$130.00	\$13.00	\$225.00	\$368.00
	Required: Student Petition. Bass Lessons.					

#### Campus Locations:

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**OC:** Oregon City Campus  
**WILS:** Wilsonville Training Center  
**OFF:** Other Off-Campus Location

#### Distance Education Notification:

**ONL:** Online Only  
**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

#### Other Coding Translations:

**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

#### ESPAÑOL: Enseñado en español

**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
OC NCT	<b>MUP-100-08 343667 TBA</b> D. TUTMARK Required: Student Petition. Guitar Lessons.					\$130.00	\$13.00	\$225.00		\$368.00
OC NCT	<b>MUP-100-09 343668 TBA</b> A. CSIKOS Required: Student Petition. Guitar Lessons.					\$130.00	\$13.00	\$225.00		\$368.00
OC NCT	<b>MUP-100-10 343669 TBA</b> G. HARRIS Required: Student Petition. Saxophone Lessons.					\$130.00	\$13.00	\$225.00		\$368.00
OC NCT	<b>MUP-100-11 343670 TBA</b> J. KLAUSE Required: Student Petition. Trumpet Lessons.					\$130.00	\$13.00	\$225.00		\$368.00
OC NCT	<b>MUP-100-12 343671 TBA</b> C. DOGGETT Required: Student Petition. Percussion & Drum Set Lessons.					\$130.00	\$13.00	\$225.00		\$368.00
OC NCT	<b>MUP-100-13 343672 TBA</b> S. TIEDEMANN Required: Student Petition. Flute Lessons.					\$130.00	\$13.00	\$225.00		\$368.00
OC NCT	<b>MUP-100-14 343673 TBA</b> T. STOJANOVIC Required: Student Petition. Piano Lessons.					\$130.00	\$13.00	\$225.00		\$368.00
OC NCT	<b>MUP-100-15 343674 TBA</b> C. LEE Required: Student Petition. Oboe Lessons.					\$130.00	\$13.00	\$225.00		\$368.00
OC NCT	<b>MUP-100-16 343675 TBA</b> B. GARDINER Required: Student Petition. Percussion Lessons.					\$130.00	\$13.00	\$225.00		\$368.00
OC NCT	<b>MUP-100-17 343676 TBA</b> L. CAMPBELL Required: Student Petition. Trombone Lessons.					\$130.00	\$13.00	\$225.00		\$368.00
OC NCT	<b>MUP-172 INDIVIDUAL LESSONS: ORGAN, 2 CREDITS</b> Required: College-level performance ability Corequisites: MUS-189									
OC NCT	<b>MUP-172-01 343724 TBA</b> J. HOLLAND Required: Student Petition.					\$260.00	\$26.00	\$450.00		\$736.00
OC NCT	<b>MUP-174 INDIVIDUAL LESSONS: VOICE, 2 CREDITS</b> Required: College-level performance ability Corequisites: MUS-189									
OC NCT	<b>MUP-174-01 343726 TBA</b> J. ISRAELS Required: Student Petition. Vocal placement required for private lessons and vocal ensembles. New students attend in Room N114 on 3/31 from 3-5 pm to demonstrate vocal range. Contact kathleen.hollingsworth@clackamas.edu with questions.					\$260.00	\$26.00	\$450.00		\$736.00
OC NCT	<b>MUP-174-02 343728 TBA</b> B. MICHAEL Required: Student Petition. Vocal placement required for private lessons and vocal ensembles. New students attend in Room N114 on 3/31 from 3-5 pm to demonstrate vocal range. Contact kathleen.hollingsworth@clackamas.edu with questions.					\$260.00	\$26.00	\$450.00		\$736.00
OC NCT	<b>MUP-174J INDIVIDUAL LESSONS: JAZZ VOICE, 2 CREDITS</b> Required: College-level performance ability Corequisites: MUS-189									
OC NCT	<b>MUP-174J-01 343729 TBA</b> J. ISRAELS Required: Student Petition. Vocal placement required for private lessons and vocal ensembles. New students attend in Room N114 on 3/31 from 3-5 pm to demonstrate vocal range. Contact kathleen.hollingsworth@clackamas.edu with questions.					\$260.00	\$26.00	\$450.00		\$736.00
OC NCT	<b>MUP-174J-02 343731 TBA</b> B. MICHAEL Required: Student Petition. Vocal placement required for private lessons and vocal ensembles. New students attend in Room N114 on 3/31 from 3-5 pm to demonstrate vocal range. Contact kathleen.hollingsworth@clackamas.edu with questions.					\$260.00	\$26.00	\$450.00		\$736.00
OC NCT	<b>MUP-174R INDIVIDUAL LESSONS: ROCK, BLUES, POP VOICE, 2 CREDITS</b> Required: College-level performance ability									
OC NCT	<b>MUP-174R-01 343733 TBA</b> J. ISRAELS Required: Student Petition. Vocal placement required for private lessons and vocal ensembles. New students attend in Room N114 on 3/31 from 3-5 pm to demonstrate vocal range. Contact kathleen.hollingsworth@clackamas.edu with questions.					\$260.00	\$26.00	\$450.00		\$736.00
OC NCT	<b>MUP-174R-02 343734 TBA</b> B. MICHAEL Required: Student Petition. Vocal placement required for private lessons and vocal ensembles. New students attend in Room N114 on 3/31 from 3-5 pm to demonstrate vocal range. Contact kathleen.hollingsworth@clackamas.edu with questions.					\$260.00	\$26.00	\$450.00		\$736.00
OC NCT	<b>MUP-175 INDIVIDUAL LESSONS: VIOLIN, 2 CREDITS</b>									

## Music: Individual Lessons - Year 1

*College-level private lessons required for music majors and available to qualified non-majors. End-of-term juried performance mandatory. May be repeated for up to 10 credits. Required: Student Petition.*

### MUP-171 INDIVIDUAL LESSONS: PIANO, 2 CREDITS

Required: College-level performance ability

Corequisites: MUS-189

OC NCT	<b>MUP-171-01 343717 TBA</b> Y. MIYAMA Required: Student Petition.					\$260.00	\$26.00	\$450.00		\$736.00
OC NCT	<b>MUP-171-02 343719 TBA</b> T. STOJANOVIC Required: Student Petition.					\$260.00	\$26.00	\$450.00		\$736.00

### MUP-171J INDIVIDUAL LESSONS: JAZZ PIANO, 2 CREDITS

Required: College-level performance ability

OC NCT	<b>MUP-171J-01 343720 TBA</b> K. POLITZER Required: Student Petition.					\$260.00	\$26.00	\$450.00		\$736.00
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### MUP-171R INDIVIDUAL LESSONS: ROCK, BLUES, POP PIANO, 2 CREDITS

Required: College-level performance ability

OC NCT	<b>MUP-171R-01 343722 TBA</b> D. FLESCNER Required: Student Petition.					\$260.00	\$26.00	\$450.00		\$736.00
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# Course Listing

2026/SP

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	Section No Instructor	Crs Reg.	Days (M,T,W,TH,F,S,SU) Tuition	Fee	Time Crs. Fee	Total
<b>Required:</b> College-level performance ability						
<b>Corequisites:</b> MUS-189						
OC NCT	<b>MUP-175-01</b> D. D'AIGLE	<b>343736 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-176 INDIVIDUAL LESSONS: VIOLA, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
<b>Corequisites:</b> MUS-189						
OC NCT	<b>MUP-176-01</b> H. OSEAS	<b>343738 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-177 INDIVIDUAL LESSONS: CELLO, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
<b>Corequisites:</b> MUS-189						
OC NCT	<b>MUP-177-01</b> C. AVERILL	<b>343739 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-178 INDIVIDUAL LESSONS: BASS, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
<b>Corequisites:</b> MUS-189						
OC NCT	<b>MUP-178-01</b> K. DEITZ	<b>343740 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-178J INDIVIDUAL LESSONS: JAZZ BASS, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
OC NCT	<b>MUP-178J-01</b> K. DEITZ	<b>343742 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
OC NCT	<b>MUP-178J-02</b> B. LEE	<b>343744 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-178R INDIVIDUAL LESSONS: ROCK, BLUES, POP BASS, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
OC NCT	<b>MUP-178R-01</b> K. DEITZ	<b>343745 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-179 INDIVIDUAL LESSONS: HARP, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
<b>Corequisites:</b> MUS-189						
OC NCT	<b>MUP-179-01</b> TBA	<b>343746 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-180 INDIVIDUAL LESSONS: GUITAR, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
<b>Corequisites:</b> MUS-189						
OC NCT	<b>MUP-180-01</b> D. TUTMARK	<b>343747 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-180J INDIVIDUAL LESSONS: JAZZ GUITAR, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
OC NCT	<b>MUP-180J-01</b> J. RADSLIFF	<b>343749 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-180R INDIVIDUAL LESSONS: ROCK, BLUES, POP GUITAR, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
OC NCT	<b>MUP-180R-01</b> A. CSIKOS	<b>343750 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
OC NCT	<b>MUP-180R-02</b> D. TUTMARK	<b>347973 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-181 INDIVIDUAL LESSONS: FLUTE, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
<b>Corequisites:</b> MUS-189						
OC NCT	<b>MUP-181-01</b> S. TIEDEMANN	<b>343751 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-182 INDIVIDUAL LESSONS: OBOE, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
<b>Corequisites:</b> MUS-189						
OC NCT	<b>MUP-182-01</b> C. LEE	<b>343755 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-183 INDIVIDUAL LESSONS: CLARINET, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
<b>Corequisites:</b> MUS-189						
OC NCT	<b>MUP-183-01</b> L. DE MARTINO	<b>343756 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-184 INDIVIDUAL LESSONS: SAXOPHONE, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
<b>Corequisites:</b> MUS-189						
OC NCT	<b>MUP-184-01</b> G. HARRIS	<b>343760 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-184J INDIVIDUAL LESSONS: JAZZ SAXOPHONE, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
OC NCT	<b>MUP-184J-01</b> G. HARRIS	<b>343762 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-185 INDIVIDUAL LESSONS: BASSOON, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
<b>Corequisites:</b> MUS-189						
OC NCT	<b>MUP-185-01</b> N. BUETTI	<b>343764 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						
<b>MUP-186 INDIVIDUAL LESSONS: TRUMPET, 2 CREDITS</b>						
<b>Required:</b> College-level performance ability						
<b>Corequisites:</b> MUS-189						
OC NCT	<b>MUP-186-01</b> J. KLAUSE	<b>343766 TBA</b>	\$260.00	\$26.00	\$450.00	\$736.00
Required: Student Petition.						

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2026/SP

Course No	Course Title, Credits						Course No	Course Title, Credits					
	Section No Instructor	Crs Reg.	Days (M,T,W,TH,F,S,SU) Tuition	Fee	Time Crs. Fee	Total		Section No Instructor	Crs Reg.	Days (M,T,W,TH,F,S,SU) Tuition	Fee	Time Crs. Fee	Total
<b>MUP-186J INDIVIDUAL LESSONS: JAZZ TRUMPET, 2 CREDITS</b>							<b>MUP-191R-01 343788 TBA</b>						
<b>Required:</b> College-level performance ability							C. DOGGETT \$260.00 \$26.00 \$450.00 \$736.00						
Required: Student Petition.							Required: Student Petition.						
OC NCT	<b>MUP-186J-01 343770 TBA</b>						<b>MUP-192T INDIVIDUAL LESSONS: AUDIO TECH, 2 CREDITS</b>						
	Q. WALKER		\$260.00	\$26.00	\$450.00	\$736.00	<b>Required:</b> College-level performance ability						
	Required: Student Petition.						Required: Student Petition.						
<b>MUP-187 INDIVIDUAL LESSONS: FRENCH HORN, 2 CREDITS</b>							<b>MUP-192T-01 343789 TBA</b>						
<b>Required:</b> College-level performance ability							M. BAIRD \$260.00 \$26.00 \$450.00 \$736.00						
<b>Corequisites:</b> MUS-189							Required: Student Petition.						
OC NCT	<b>MUP-187-01 343771 TBA</b>						<b>MUP-192T-02 343790 TBA</b>						
	R. OLASON		\$260.00	\$26.00	\$450.00	\$736.00	D. BADSTUBNER \$260.00 \$26.00 \$450.00 \$736.00						
	Required: Student Petition.						Required: Student Petition.						
<b>MUP-188 INDIVIDUAL LESSONS: TROMBONE, 2 CREDITS</b>							<b>MUP-192T-03 343791 TBA</b>						
<b>Required:</b> College-level performance ability							R. SOMMERS \$260.00 \$26.00 \$450.00 \$736.00						
<b>Corequisites:</b> MUS-189							Required: Student Petition.						
OC NCT	<b>MUP-188-01 343773 TBA</b>						<b>Music: Individual Lessons - Year 2</b>						
	L. CAMPBELL		\$260.00	\$26.00	\$450.00	\$736.00	<i>Second-year private lessons required for music majors and available to qualified non-majors. End-of-term juried performance mandatory. May be repeated for up to 10 credits.</i>						
	Required: Student Petition.												
OC NCT	<b>MUP-188-02 343776 TBA</b>						<b>MUP-271 INDIVIDUAL LESSONS: PIANO, 2 CREDITS</b>						
	C. RENEAU		\$260.00	\$26.00	\$450.00	\$736.00	<b>Prerequisites:</b> MUP-171 (6 credits)						
	Required: Student Petition.						<b>Corequisites:</b> MUS-189						
<b>MUP-188J INDIVIDUAL LESSONS: JAZZ TROMBONE, 2 CREDITS</b>							<b>Required:</b> Sophomore-level performance ability						
<b>Required:</b> College-level performance ability													
OC NCT	<b>MUP-188J-01 343777 TBA</b>						<b>MUP-271-01 343803 TBA</b>						
	L. CAMPBELL		\$260.00	\$26.00	\$450.00	\$736.00	Y. MIYAMA \$260.00 \$26.00 \$450.00 \$736.00						
	Required: Student Petition.						<b>MUP-271-02 343805 TBA</b>						
OC NCT	<b>MUP-188-02 343776 TBA</b>						T. STOJANOVIC \$260.00 \$26.00 \$450.00 \$736.00						
	C. RENEAU		\$260.00	\$26.00	\$450.00	\$736.00	<b>MUP-271J INDIVIDUAL LESSONS: JAZZ PIANO, 2 CREDITS</b>						
	Required: Student Petition.						<b>Prerequisites:</b> MUP-171J (6 credits)						
<b>MUP-189 INDIVIDUAL LESSONS: EUPHONIUM, 2 CREDITS</b>							<b>Required:</b> Sophomore-level performance ability						
<b>Required:</b> College-level performance ability													
<b>Corequisites:</b> MUS-189							<b>OC NCT MUP-271J-01 343807 TBA</b>						
OC NCT	<b>MUP-189-01 343780 TBA</b>						K. POLITZER \$260.00 \$26.00 \$450.00 \$736.00						
	TBA		\$260.00	\$26.00	\$450.00	\$736.00	<b>MUP-271R INDIVIDUAL LESSONS: ROCK, BLUES, POP PIANO, 2 CREDITS</b>						
	Required: Student Petition.						<b>Prerequisites:</b> MUP-171R (6 credits)						
<b>MUP-190 INDIVIDUAL LESSONS: TUBA, 2 CREDITS</b>							<b>Required:</b> Sophomore-level performance ability						
<b>Required:</b> College-level performance ability													
<b>Corequisites:</b> MUS-189							<b>OC NCT MUP-271R-01 343810 TBA</b>						
OC NCT	<b>MUP-190-01 343783 TBA</b>						D. FLESCHNER \$260.00 \$26.00 \$450.00 \$736.00						
	TBA		\$260.00	\$26.00	\$450.00	\$736.00	<b>MUP-272 INDIVIDUAL LESSONS: ORGAN, 2 CREDITS</b>						
	Required: Student Petition.						<b>Prerequisites:</b> MUP-172 (6 credits)						
<b>MUP-191 INDIVIDUAL LESSONS: PERCUSSION, 2 CREDITS</b>							<b>Corequisites:</b> MUS-189						
<b>Required:</b> College-level performance ability							<b>Required:</b> Sophomore-level performance ability						
<b>Corequisites:</b> MUS-189													
OC NCT	<b>MUP-191-01 343785 TBA</b>						<b>OC NCT MUP-272-01 343814 TBA</b>						
	B. GARDINER		\$260.00	\$26.00	\$450.00	\$736.00	J. HOLLAND \$260.00 \$26.00 \$450.00 \$736.00						
	Required: Student Petition.						<b>MUP-274 INDIVIDUAL LESSONS: VOICE, 2 CREDITS</b>						
<b>MUP-191J INDIVIDUAL LESSONS: JAZZ PERCUSSION, 2 CREDITS</b>							<b>Prerequisites:</b> MUP-174 (6 credits)						
<b>Required:</b> College-level performance ability							<b>Corequisites:</b> MUS-189						
<b>Corequisites:</b> MUS-189							<b>Required:</b> Sophomore-level performance ability						
OC NCT	<b>MUP-191J-01 343786 TBA</b>						<b>OC NCT MUP-274-01 343817 TBA</b>						
	C. DOGGETT		\$260.00	\$26.00	\$450.00	\$736.00	J. ISRAELS \$260.00 \$26.00 \$450.00 \$736.00						
	Required: Student Petition.						<b>MUP-274-02 343820 TBA</b>						
<b>MUP-191R INDIVIDUAL LESSONS: ROCK, BLUES, POP DRUMSET, 2 CREDITS</b>							B. MICHAEL \$260.00 \$26.00 \$450.00 \$736.00						
<b>Required:</b> College-level performance ability													

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<b>Prerequisites:</b> MUP-174J (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-274J-01 343822 TBA</b>		J. ISRAELS			\$260.00	\$26.00	\$450.00		\$736.00
OC NCT	<b>MUP-274J-02 343825 TBA</b>		B. MICHAEL			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-274R INDIVIDUAL LESSONS: ROCK, BLUES, POP VOICE, 2 CREDITS</b> <b>Prerequisites:</b> MUP-174R (6 credits) <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-274R-01 343827 TBA</b>		J. ISRAELS			\$260.00	\$26.00	\$450.00		\$736.00
OC NCT	<b>MUP-274R-02 343828 TBA</b>		B. MICHAEL			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-275 INDIVIDUAL LESSONS: VIOLIN, 2 CREDITS</b> <b>Prerequisites:</b> MUP-175 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-275-01 343829 TBA</b>		D. D'AIGLE			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-276 INDIVIDUAL LESSONS: VIOLA, 2 CREDITS</b> <b>Prerequisites:</b> MUP-176 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-276-01 343831 TBA</b>		H. OSEAS			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-277 INDIVIDUAL LESSONS: CELLO, 2 CREDITS</b> <b>Prerequisites:</b> MUP-177 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-277-01 343833 TBA</b>		C. AVERILL			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-278 INDIVIDUAL LESSONS: BASS, 2 CREDITS</b> <b>Prerequisites:</b> MUP-178 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-278-01 343835 TBA</b>		K. DEITZ			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-278J INDIVIDUAL LESSONS: JAZZ BASS, 2 CREDITS</b> <b>Prerequisites:</b> MUP-178J (6 credits) <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-278J-01 343838 TBA</b>		K. DEITZ			\$260.00	\$26.00	\$450.00		\$736.00
OC NCT	<b>MUP-278J-02 343840 TBA</b>		B. LEE			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-278R INDIVIDUAL LESSONS: ROCK, BLUES, POP BASS, 2 CREDITS</b> <b>Prerequisites:</b> MUP-178R (6 credits) <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-278R-01 343843 TBA</b>		K. DEITZ			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-279 INDIVIDUAL LESSONS: HARP, 2 CREDITS</b> <b>Prerequisites:</b> MUP-179 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-279-01 343844 TBA</b>		TBA			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-280 INDIVIDUAL LESSONS: GUITAR, 2 CREDITS</b> <b>Prerequisites:</b> MUP-180 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-280-01 343846 TBA</b>		D. TUTMARK			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-280J INDIVIDUAL LESSONS: JAZZ GUITAR, 2 CREDITS</b> <b>Prerequisites:</b> MUP-180J (6 credits) <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-280J-01 343848 TBA</b>		J. RADSLIFF			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-280R INDIVIDUAL LESSONS: ROCK, BLUES, POP GUITAR, 2 CREDITS</b> <b>Prerequisites:</b> MUP-180R (6 credits) <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-280R-01 343851 TBA</b>		A. CSIKOS			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-281 INDIVIDUAL LESSONS: FLUTE, 2 CREDITS</b> <b>Prerequisites:</b> MUP-181 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-281-01 343853 TBA</b>		S. TIEDEMANN			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-282 INDIVIDUAL LESSONS: OBOE, 2 CREDITS</b> <b>Prerequisites:</b> MUP-182 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-282-01 343859 TBA</b>		C. LEE			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-283 INDIVIDUAL LESSONS: CLARINET, 2 CREDITS</b> <b>Prerequisites:</b> MUP-183 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-283-01 343860 TBA</b>		L. DE MARTINO			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-284 INDIVIDUAL LESSONS: SAXOPHONE, 2 CREDITS</b> <b>Prerequisites:</b> MUP-184 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-284-01 343864 TBA</b>		G. HARRIS			\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-284J INDIVIDUAL LESSONS: JAZZ SAXOPHONE, 2 CREDITS</b> <b>Prerequisites:</b> MUP-184J (6 credits) <b>Required:</b> Sophomore-level performance ability										

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**Other Coding Translations:**  
**TBA:** To be arranged: contact department first class  
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**ESPAÑOL:** Enseñado en español  
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## Course Listing

2026/SP

Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
OC NCT	<b>MUP-284J-01 343868 TBA</b> G. HARRIS					\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-285 INDIVIDUAL LESSONS: BASSOON, 2 CREDITS</b> <b>Prerequisites:</b> MUP-185 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-285-01 343870 TBA</b> N. BUETTI					\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-286 INDIVIDUAL LESSONS: TRUMPET, 2 CREDITS</b> <b>Prerequisites:</b> MUP-186 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-286-01 343871 TBA</b> J. KLAUSE					\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-286J INDIVIDUAL LESSONS: JAZZ TRUMPET, 2 CREDITS</b> <b>Prerequisites:</b> MUP-186J (6 credits) <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-286J-01 343875 TBA</b> Q. WALKER					\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-287 INDIVIDUAL LESSONS: FRENCH HORN, 2 CREDITS</b> <b>Prerequisites:</b> MUP-187 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-287-01 343877 TBA</b> R. OLASON					\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-288 INDIVIDUAL LESSONS: TROMBONE, 2 CREDITS</b> <b>Prerequisites:</b> MUP-188 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-288-01 343879 TBA</b> L. CAMPBELL					\$260.00	\$26.00	\$450.00		\$736.00
OC NCT	<b>MUP-288-02 343882 TBA</b> C. RENEAU					\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-288J INDIVIDUAL LESSONS: JAZZ TROMBONE, 2 CREDITS</b> <b>Prerequisites:</b> MUP-188J (6 credits) <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-288J-01 343883 TBA</b> L. CAMPBELL					\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-289 INDIVIDUAL LESSONS: EUPHONIUM, 2 CREDITS</b> <b>Prerequisites:</b> MUP-189 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-289-01 343886 TBA</b> TBA					\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-290 INDIVIDUAL LESSONS: TUBA, 2 CREDITS</b> <b>Prerequisites:</b> MUP-190 (6 credits) <b>Corequisites:</b> MUS-189 <b>Required:</b> Sophomore-level performance ability										
OC NCT	<b>MUP-290-01 343887 TBA</b> TBA					\$260.00	\$26.00	\$450.00		\$736.00
<b>MUP-291 INDIVIDUAL LESSONS: PERCUSSION, 2 CREDITS</b>										

**Prerequisites:** MUP-191 (6 credits)

**Corequisites:** MUS-189

**Required:** Sophomore-level performance ability

OC NCT	<b>MUP-291-01 343890 TBA</b> B. GARDINER					\$260.00	\$26.00	\$450.00		\$736.00
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**MUP-291J INDIVIDUAL LESSONS: JAZZ PERCUSSION, 2 CREDITS**

**Prerequisites:** MUP-191J (6 credits)

**Required:** Sophomore-level performance ability

OC NCT	<b>MUP-291J-01 343892 TBA</b> C. DOGGETT					\$260.00	\$26.00	\$450.00		\$736.00
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**MUP-291R INDIVIDUAL LESSONS: ROCK, BLUES, POP DRUMSET, 2 CREDITS**

**Prerequisites:** MUP-191R (6 credits)

**Required:** Sophomore-level performance ability

OC NCT	<b>MUP-291R-01 343895 TBA</b> C. DOGGETT					\$260.00	\$26.00	\$450.00		\$736.00
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**MUP-292T INDIVIDUAL LESSONS: AUDIO TECH, 2 CREDITS**

**Prerequisites:** MUP-192T (6 credits)

**Required:** Sophomore-level performance ability

OC NCT	<b>MUP-292T-01 343896 TBA</b> M. BAIRD					\$260.00	\$26.00	\$450.00		\$736.00
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OC NCT	<b>MUP-292T-02 343897 TBA</b> D. BADSTUBNER					\$260.00	\$26.00	\$450.00		\$736.00
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OC NCT	<b>MUP-292T-03 343899 TBA</b> R. SOMMERS					\$260.00	\$26.00	\$450.00		\$736.00
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## Nursing

*The Nursing program at Clackamas Community College is a full partner in the Oregon Consortium for Nursing Education (OCNE). The curriculum in OCNE nursing programs is a competency-based curriculum developed in collaboration with Oregon Health & Science University (OHSU) and other community colleges around the state. This curriculum, which has been approved by the Oregon State Board of Education as well as the Oregon State Board of Nursing, can ultimately culminate in a Baccalaureate of Science Degree with a focus in Nursing on the community college campus offered by OHSU.*

*Admission into the nursing program is by special application only. Acceptance to the nursing program allows for co-enrollment to Clackamas Community College and Oregon Health & Science University, School of Nursing.*

*The Nursing Assistant course, while not required to enter the Nursing program, provides a strong foundation regarding the delivery of care to clients in various settings.*

**NRS-111 FOUNDATIONS OF NURSING IN CHRONIC ILLNESS I, 3 CREDITS**

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Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

This course introduces assessment and common interventions (including technical procedures) for patients with chronic illnesses common across the life span in multiple ethnic groups. The patient's and family's lived experience of the condition is explored. Clinical practice guidelines and research evidence are used to guide clinical judgments in care of individuals with chronic conditions. Multidisciplinary team roles and responsibilities are explored in the context of delivering safe, high quality health care to individuals with chronic conditions (includes practical and legal aspects of delegation). Cultural, ethical, legal and health care delivery issues are explored through case scenarios and clinical practice. Case exemplars include children with asthma, adolescents with a mood disorder, adults with type 2 diabetes, and older adults with dementia. The course includes classroom and clinical learning experiences.

**Required:** Acceptance into the CCC nursing program

**Corequisites:** NRS-111C and NRS-233

**Prerequisites:** NRS-112, NRS-112C, NRS-231, and NRS-232

HAR	<b>NRS-111-01</b>	<b>348012 M</b>			<b>9-12:00 PM</b>	
	C. BURT		\$390.00	\$39.00	\$400.00	\$829.00
	T. VANDERWERF					

#### **NRS-111C FOUNDATIONS OF NURSING IN CHRONIC ILLNESS I CLINICAL, 3 CREDITS**

This course introduces assessment and common interventions (including technical procedures) for clients with chronic illnesses common across the life span in major ethnic groups within Oregon. The client's and family's lived experience of the condition is explored. Clinical practice guidelines and research evidence are used to guide clinical judgments in care of individuals with chronic conditions. Multidisciplinary team roles and responsibilities are considered in the context of delivering safe, high quality health care to individuals with chronic conditions (includes practical and legal aspects of delegation). Cultural, ethical, legal and health care delivery issues are explored through case scenarios and clinical practice. Case exemplars include children with asthma, adolescents with a mood disorder, adults with type 2 diabetes, and older adults with dementia. The course includes classroom and clinical learning experiences with simulation experience as part of total clinical hours.

**Required:** Acceptance into the CCC nursing program

**Corequisites:** NRS-111 and NRS-233

**Prerequisites:** NRS-112, NRS-112C, NRS-231, and NRS-232

HAR	<b>NRS-111C-01</b>	<b>348013 T</b>			<b>9-10:50 AM</b>	
	C. BURT		\$390.00	\$39.00	\$350.00	\$779.00
	T. VANDERWERF					
HAR	<b>NRS-111C-02</b>	<b>348014 T</b>			<b>11-12:50 PM</b>	
	C. BURT		\$390.00	\$39.00	\$350.00	\$779.00
	T. VANDERWERF					
HAR	<b>NRS-111C-03</b>	<b>348015 T</b>			<b>1:30 -3:20 PM</b>	
	C. BURT		\$390.00	\$39.00	\$350.00	\$779.00
	T. VANDERWERF					

#### **NRS-224 INTEGRATIVE PRACTICUM, 2 CREDITS**

This course is designed to formalize the clinical judgments, knowledge and skills necessary in safe, registered nurse practice. Faculty/Clinical Teaching Associate/Student Triad Model provides a context that allows the student to experience the nursing role in a selected setting, balancing demands of professional nursing and lifelong learner. Analysis and reflection throughout the clinical experience provide the student with evaluative criteria against which they can judge their own performance and develop a practice framework. Includes seminar, self-directed study and clinical experience.

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Course No	Course Title, Credits					
Section No Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time Crs. Fee	Total

**Required:** Acceptance into the CCC nursing program

**Prerequisites:** NRS-221 and NRS-221C

**Corequisites:** NRS-224C

HAR	<b>NRS-224-01</b>	<b>343969 M</b>			<b>10:30 -12:20 PM</b>	
	C. LEESE		\$260.00	\$26.00	\$375.00	\$661.00
	K. RICHARDS					

#### **NRS-224C INTEGRATIVE PRACTICUM CLINICAL, 7 CREDITS**

This course is designed to formalize the clinical judgments, knowledge and skills necessary in safe, registered nurse practice. Faculty/Clinical Teaching Associate/Student Triad Model provides a context that allows the student to experience the nursing work world in a selected setting, balancing demands of job and lifelong learner. Analysis and reflection throughout the clinical experience provide the student with evaluative criteria against which they can judge their own performance and develop a practice framework. Includes clinical debrief, self-directed study and clinical experience.

**Required:** Acceptance into the CCC nursing program

**Prerequisites:** NRS-221 and NRS-221C

**Corequisites:** NRS-224

HAR	<b>NRS-224C-01</b>	<b>343970 M</b>			<b>8:30 -10:20 AM</b>	
	C. LEESE		\$910.00	\$91.00	\$470.00	\$1,471.00
	K. RICHARDS					
HAR	<b>NRS-224C-02</b>	<b>343971 M</b>			<b>8:30 -10:20 AM</b>	
	C. LEESE		\$910.00	\$91.00	\$470.00	\$1,471.00
	K. RICHARDS					
HAR	<b>NRS-224C-03</b>	<b>343972 M</b>			<b>8:30 -10:20 AM</b>	
	C. LEESE		\$910.00	\$91.00	\$470.00	\$1,471.00
	K. RICHARDS					
HAR	<b>NRS-224C-04</b>	<b>343973 M</b>			<b>8:30 -10:20 AM</b>	
	C. LEESE		\$910.00	\$91.00	\$470.00	\$1,471.00
	K. RICHARDS					
HAR	<b>NRS-224C-05</b>	<b>343975 M</b>			<b>8:30 -10:20 AM</b>	
	C. LEESE		\$910.00	\$91.00	\$470.00	\$1,471.00
	K. RICHARDS					

#### **NRS-233 PATHOPHYSIOLOGICAL PROCESSES II, 3 CREDITS**

This sequel to NRS-232 continues to explore pathophysiological processes that contribute to disease states across the lifespan and human responses to those processes. Students will learn to make selected clinical decisions in the context of nursing regarding using current, reliable sources of pathophysiology information, selecting and interpreting focused nursing assessments based on knowledge of pathophysiological processes, teaching persons from diverse populations regarding pathophysiological processes, and communicating with other health professionals regarding pathophysiological processes. The course addresses additional pathophysiological processes not contained in NRS-232.

**Required:** Acceptance into the CCC nursing program

**Prerequisites:** NRS-111, NRS-111C, NRS-231, and NRS-232

**Corequisites:** NRS-112 and NRS-112C

HAR	<b>NRS-233-01</b>	<b>343977 M</b>			<b>12:30 -2:20 PM</b>	
	A. DROUIN		\$390.00	\$39.00	\$260.00	\$689.00
	Restricted: Admitted CCC nursing students only.					

#### **NUR-100 NURSING ASSISTANT I, 6.5 CREDITS**

Course No Course Title, Credits						
Section No	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Time	Total		
Instructor	Tuition	Fee	Crs. Fee			
This course provides the student with the skills to perform basic level nursing care. Certified Nursing Assistants are defined by law as people who assist licensed nursing personnel in the provision of nursing care. Prepares the student to perform routine nursing assistant tasks to clients in sub-acute care settings as well as in the community. Includes didactic and skills lab instruction. Major topics covered include: collaboration with health care team, communication & interpersonal skills, person-centered care, infection control and prevention, safety and emergency procedures, assisting with activities of daily living, mental health and social service needs of clients, technical skills, acquiring observation and reporting skills, documentation of care provided and end-of-life care. Upon successful completion of this course, students may apply for the Oregon State Board of Nursing certification exam for nursing assistants (CNA 1). This course is approved by the Oregon State Board of Nursing. Required: Student Petition.						
<b>Required:</b> Must be at least 18 years of age; High School Diploma or equivalent; Complete online application located on program webpage and attend a mandatory orientation. During the orientation, students will start the process for completing all non-academic requirements. Non-academic requirements include: Immunizations (MMR, Varicella, Tdap, Hep B, COVID-19, seasonal Flu); complete a Criminal Background Check; Drug Screen; Tuberculosis test; BLS/CPR for Healthcare Providers certification through American Heart Association (AHA)						
<b>Corequisites:</b> NUR-100C						
HAR HYB	NUR-100-01	343978 TTH	1-5:30 PM			
	M. BAKER	\$845.00	\$84.50	\$350.00	\$1,279.50	
	M. COX					
	J. LAFRANCE					
	Required: Student Petition. Application required; see webpage for application. Attend mandatory orientation meeting. Orientation details will be emailed to accepted and waitlisted students.					
HAR HYB	NUR-100-02	343979 TTH	8-12:30 PM			
	M. BAKER	\$845.00	\$84.50	\$350.00	\$1,279.50	
	M. COX					
	J. LAFRANCE					
	Required: Student Petition. Application required; see webpage for application. Attend mandatory orientation meeting. Orientation details will be emailed to accepted and waitlisted students.					
<b>NUR-100C NURSING ASSISTANT I CLINICAL, 0 CREDIT</b>						
Prepares the student to perform routine nursing assistant tasks to clients in hospitals, long-term and skilled care facilities, as well as the community. Includes clinical practicum. Required: Student Petition.						
<b>Corequisites:</b> NUR-100						
HAR	NUR-100C-01	343982 TBA				
	M. BAKER	\$0.00	\$0.00	\$0.00	\$0.00	
	M. COX					
	Required: Student Petition. Details regarding clinical schedule will be given during the mandatory orientation as well as the first few weeks of the course.					
HAR	NUR-100C-02	343983 TBA				
	M. BAKER	\$0.00	\$0.00	\$0.00	\$0.00	
	M. COX					
	Required: Student Petition. Details regarding clinical schedule will be given during the mandatory orientation as well as the first few weeks of the course.					
HAR	NUR-100C-03	343984 TBA				
	M. COX	\$0.00	\$0.00	\$0.00	\$0.00	
	J. LAFRANCE					
	Required: Student Petition. Details regarding clinical schedule will be given during the mandatory orientation as well as the first few weeks of the course.					

Course No	Section No	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Time	Total	
	Instructor	Tuition	Fee	Crs. Fee		
HAR	NUR-100C-04	348016 TBA				
	M. COX	\$0.00	\$0.00	\$0.00	\$0.00	
	Required: Student Petition. Details regarding clinical schedule will be given during the mandatory orientation as well as the first few weeks of the course.					
<b>Philosophy</b>						
<b>PHL-101 PHILOSOPHICAL PROBLEMS, 4 CREDITS</b>						
Introduces basic philosophical questions such as: What is reality? What is knowledge? What is truth? Can humans freely choose? What is human awareness? What is a meaningful life?						
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z						
OC NCT	PHL-101-01	344639 TTH	1-2:50 PM			
	K. SEVERSON	\$520.00	\$52.00	\$0.00	\$572.00	
<b>PHL-102 ETHICS, 4 CREDITS</b>						
Introduces the study of morality with concepts of good, harm, habits, character, perception, behavior and action. Also considers the different theories of human capacity for responsibility.						
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z						
OC HYB NCT	PHL-102-01	344645 W	1-2:50 PM			
	M. BAILEY	\$520.00	\$52.00	\$0.00	\$572.00	
ONL NCT	PHL-102-02	345534				
	M. BAILEY	\$520.00	\$52.00	\$0.00	\$572.00	
<b>PHL-103 CRITICAL REASONING, 4 CREDITS</b>						
Helps students identify and understand the process by which they themselves and others arrive at conclusions; improves their critical reasoning skills; introduces basic logical concepts of argument; and gives opportunity for students to apply course skills to relevant matters.						
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z						
ONL LCT	PHL-103-01	344646				
	K. HADDIX	\$520.00	\$52.00	\$0.00	\$572.00	
<b>Phlebotomy</b>						
<b>PHB-110 FUNDAMENTALS OF PHLEBOTOMY, 5 CREDITS</b>						
Introduces students to the practice of phlebotomy and the role of the phlebotomist as part of the healthcare team. Students will become familiar with phlebotomy equipment and learn about basic blood collection procedures. Students will identify medical terminology, anatomy, and physiology related to phlebotomy. Students will learn about specimen collection procedures, safety protocols, quality control, and regulatory compliance related to the role of a phlebotomist. This course provides recorded skills demonstrations to help prepare students for the skills lab.						
<b>Required:</b> Acceptance into the Phlebotomy program						
<b>Corequisites:</b> PHB-112 and PHB-115						
<b>Recommended Prerequisites:</b> BI-120, or BI-101 & BI-102, or BI-231 & BI-232 & BI-233. HP-110, and WR-101 or WR-121Z						
ONL	PHB-110-01	343985				
	E. ZUNIGA	\$650.00	\$65.00	\$0.00	\$715.00	
	Required: Student Petition.					
<b>PHB-112 PHLEBOTOMY TECHNIQUES, 2 CREDITS</b>						

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## Philosophy

### PHL-101 PHILOSOPHICAL PROBLEMS, 4 CREDITS

Introduces basic philosophical questions such as: What is reality? What is knowledge? What is truth? Can humans freely choose? What is human awareness? What is a meaningful life?

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

OC NCT	<b>PHL-101-01</b>	<b>344639 TTH</b>			<b>1-2:50 PM</b>	
	K. SEVERSON	\$520.00	\$52.00	\$0.00		\$572.00

### PHL-102 ETHICS, 4 CREDITS

Introduces the study of morality with concepts of good, harm, habits, character, perception, behavior and action. Also considers the different theories of human capacity for responsibility.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

OC HYB NCT	<b>PHL-102-01</b>	<b>344645 W</b>			<b>1-2:50 PM</b>	
	M. BAILEY	\$520.00	\$52.00	\$0.00		\$572.00
ONL NCT	<b>PHL-102-02</b>	<b>345534</b>				
	M. BAILEY	\$520.00	\$52.00	\$0.00		\$572.00

### PHL-103 CRITICAL REASONING, 4 CREDITS

Helps students identify and understand the process by which they themselves and others arrive at conclusions; improves their critical reasoning skills; introduces basic logical concepts of argument; and gives opportunity for students to apply course skills to relevant matters.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

ONL LCT	<b>PHL-103-01</b>	<b>344646</b>				
	K. HADDIX	\$520.00	\$52.00	\$0.00		\$572.00

## Phlebotomy

### PHB-110 FUNDAMENTALS OF PHLEBOTOMY, 5 CREDITS

Introduces students to the practice of phlebotomy and the role of the phlebotomist as part of the healthcare team. Students will become familiar with phlebotomy equipment and learn about basic blood collection procedures. Students will identify medical terminology, anatomy, and physiology related to phlebotomy. Students will learn about specimen collection procedures, safety protocols, quality control, and regulatory compliance related to the role of a phlebotomist. This course provides recorded skills demonstrations to help prepare students for the skills lab.

**Required:** Acceptance into the Phlebotomy program

**Corequisites:** PHB-112 and PHB-115

**Recommended Prerequisites:** BI-120, or BI-101 & BI-102, or BI-231 & BI-232 & BI-233. HP-110, and WR-101 or WR-121Z

ONL	<b>PHB-110-01</b>	<b>343985</b>				
	E. ZUNIGA	\$650.00	\$65.00	\$0.00		\$715.00
	Required: Student Petition.					

### PHB-112 PHLEBOTOMY TECHNIQUES, 2 CREDITS

Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
	Perform venipuncture, capillary puncture, and specimen processing. This course is designed to provide students with active-learning experiences and hands-on training necessary to develop the skills of an entry-level phlebotomist. The student will learn the procedures performed by a phlebotomist and will become familiar with different types of equipment and techniques applied. Instruction on laboratory safety and standards will be emphasized.									
	<b>Required:</b> Acceptance into the Phlebotomy program									
	<b>Corequisites:</b> PHB-110 and PHB-115									
	<b>Recommended Prerequisites:</b> BI-120, or BI-101 & BI-102, or BI-231 & BI-232 & BI-233. HP-110, and WR-101 or WR-121Z									

HAR	<b>PHB-112-01</b>	<b>343986 WF</b>						<b>9-12:00 PM</b>		
	J. ALLISON		\$260.00	\$26.00	\$150.00	\$436.00				
	E. ZUNIGA									
	Required: Student Petition.									
HAR	<b>PHB-112-02</b>	<b>343988 WF</b>						<b>1-4:00 PM</b>		
	J. ALLISON		\$260.00	\$26.00	\$150.00	\$436.00				
	E. ZUNIGA									
	Required: Student Petition.									

**PHB-115 PROFESSIONALISM FOR PHLEBOTOMISTS, 1 CREDIT**

Introduces professionalism in the healthcare setting and prepares students for clinical placement.

**Required:** Acceptance into the Phlebotomy program. Compliance with the Oregon Health Authority rules for students. Vaccination records for Tdap, MMR, Varicella, Hep B, COVID-19. Completed criminal background check, drug screen, and BLS CPR card through the American Heart Association

**Corequisites:** PHB-110 and PHB-112

ONL	<b>PHB-115-01</b>	<b>343990</b>								
	E. ZUNIGA		\$130.00	\$13.00	\$100.00	\$243.00				
	Required: Student Petition.									

**Physical Education****PE-185 PHYSICAL ACTIVITY CLASSES, 1 CREDIT**

**Recommended:** Current physical examination before enrolling

OC NCT	<b>BASKETBALL/POWER I, 1 CREDIT</b>									
	<b>PE-185-082</b>	<b>348063 MW</b>						<b>5:30 -6:50 PM</b>		
	B. STAMME		\$130.00	\$13.00	\$30.00	\$173.00				
	Required: Student Petition.									
ONL NCT	<b>CROSS TRAINING III, 1 CREDIT</b>									
	<b>PE-185-017</b>	<b>348061</b>								
	B. STAMME		\$130.00	\$13.00	\$30.00	\$173.00				
ONL NCT	<b>CROSS TRAINING III, 1 CREDIT</b>									
	<b>PE-185-041</b>	<b>348067</b>								
	B. STAMME		\$130.00	\$13.00	\$30.00	\$173.00				
OC NCT	<b>VOLLEYBALL CONDITIONING I, 1 CREDIT</b>									
	<b>PE-185-071</b>	<b>348062 T</b>						<b>6-8:50 PM</b>		
	A. ITAMI		\$130.00	\$13.00	\$30.00	\$173.00				
	Required: Student Petition.									
ONL NCT	<b>WALK, JOG, FITNESS III, 1 CREDIT</b>									
	<b>PE-185-002</b>	<b>344541</b>								
	K. MCHONE		\$130.00	\$13.00	\$30.00	\$173.00				
ONL NCT	<b>WEIGHT TRAINING III, 1 CREDIT</b>									
	<b>PE-185-040</b>	<b>344544</b>								
	B. STAMME		\$130.00	\$13.00	\$30.00	\$173.00				

**Campus Locations:**  
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**OC:** Oregon City Campus  
**WILS:** Wilsonville Training Center  
**OFF:** Other Off-Campus Location

**Distance Education Notification:**  
**ONL:** Online Only  
**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

**Other Coding Translations:**  
**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
OC NCT	<b>WEIGHT TRAINING III, 1 CREDIT</b>									
	<b>PE-185-074</b>	<b>344551 TTH</b>						<b>10-11:20 AM</b>		
	J. STEINKE		\$130.00	\$13.00	\$30.00	\$173.00				
OC NCT	<b>WRESTLING/INTERNATIONAL, 1 CREDIT</b>									
	<b>PE-185-018</b>	<b>348069 TTH</b>						<b>3-4:20 PM</b>		
	R. SANCHEZ		\$130.00	\$13.00	\$30.00	\$173.00				
	Required: Student Petition.									
ONL NCT	<b>YOGA III, 1 CREDIT</b>									
	<b>PE-185-043</b>	<b>344546</b>								
	E. HANCOCK		\$130.00	\$13.00	\$30.00	\$173.00				

**PE-194 PROFESSIONAL ACTIVITIES, 1 CREDIT**

Team skills and strategy courses. Designed to provide the student with basic skills and methodology necessary to conduct physical fitness programs in the school, corporate, and community setting. Emphasis is placed on fitness concepts, techniques of weight training and aerobic exercises to encourage life-long physical activity. Course offerings are: baseball, basketball, cross-country, soccer, softball, track and field, volleyball, and wrestling. Required: Student Petition.

OC NCT	<b>BASEBALL SKILLS &amp; STRATEGIES, 1 CREDIT</b>									
	<b>PE-194-01</b>	<b>348064 MW</b>						<b>3-4:20 PM</b>		
	J. HOPPEL		\$130.00	\$13.00	\$30.00	\$173.00				
	Required: Student Petition.									
OC NCT	<b>SOFTBALL SKILLS &amp; STRATEGIES, 1 CREDIT</b>									
	<b>PE-194-02</b>	<b>348065 MW</b>						<b>1-2:20 PM</b>		
	J. BUEL		\$130.00	\$13.00	\$30.00	\$173.00				
	Required: Student Petition.									
OC NCT	<b>TRACK &amp; FIELD SKILLS &amp; STRATEG, 1 CREDIT</b>									
	<b>PE-194-03</b>	<b>348066 MWF</b>						<b>2-2:50 PM</b>		
	K. MCHONE		\$130.00	\$13.00	\$30.00	\$173.00				
	Required: Student Petition.									

**PE-240 STRENGTH & CONDITIONING THEORY & TECHNIQUES, 3 CREDITS**

An overview of introductory exercise physiology, biomechanics, program design, and exercise techniques that prepares students to design and implement physical training programs and exercise for clients and athletes.

OC HYB NCT	<b>PE-240-01</b>	<b>344555 W TBA</b>						<b>11-11:50 AM</b>		
	K. MCHONE		\$390.00	\$39.00	\$0.00	\$429.00				

**PE-270 SPORT AND EXERCISE PSYCHOLOGY, 3 CREDITS**

The course is designed to provide students with the basic understanding and knowledge of psychological skills used to improve physical performance in themselves, peers, teammates, and athletes they coach. The course would be well-suited for athletes, coaches, or exercise leaders.

ONL NCT	<b>PE-270-01</b>	<b>344557</b>								
	K. MCHONE		\$390.00	\$39.00	\$0.00	\$429.00				

**Physics****PH-121 ASTRONOMY, 4 CREDITS**

A lab course including the history of astronomy, the Earth and moon, all planets in our solar system, along with asteroids, meteors and comets.

## Course Listing

2026/SP

Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
<b>Prerequisites:</b> MTH-065 or MTH-098 with a C or better or placement in MTH-095 <b>Corequisites:</b> PH-121L <b>Prerequisites:</b> WRD-090 or placement in WRD-098										
ONL LCT	<b>PH-121-40</b>	<b>344566</b>	C. SHARON			\$520.00	\$52.00	\$25.00		\$597.00
<b>PH-121L ASTRONOMY LAB, 0 CREDIT</b> Lab course for PH-121L <b>Corequisites:</b> PH-121										
ONL	<b>PH-121L-40</b>	<b>344569</b>	C. SHARON			\$0.00	\$0.00	\$0.00		\$0.00
<b>PH-122 GENERAL ASTRONOMY, 4 CREDITS</b> A lab course including the properties of our sun, other stars and stellar evolution. <b>Prerequisites:</b> PH-121 or GS-107 <b>Corequisites:</b> PH-122L										
ONL LCT	<b>PH-122-40</b>	<b>344571</b>	C. SHARON			\$520.00	\$52.00	\$20.00		\$592.00
<b>PH-122L GENERAL ASTRONOMY LAB, 0 CREDIT</b> Lab course for PH-122 <b>Corequisites:</b> PH-122										
ONL	<b>PH-122L-40</b>	<b>344573</b>	C. SHARON			\$0.00	\$0.00	\$0.00		\$0.00
<b>PH-123 GENERAL ASTRONOMY, 4 CREDITS</b> A lab course including star clusters, the properties of our own galaxy, the other galaxies and cosmology. <b>Prerequisites:</b> PH-122 <b>Corequisites:</b> PH-123L										
ONL	<b>PH-123-40</b>	<b>344575</b>	C. SHARON			\$520.00	\$52.00	\$20.00		\$592.00
<b>PH-123L GENERAL ASTRONOMY LAB, 0 CREDIT</b> Lab course for PH-123 <b>Corequisites:</b> PH-123										
ONL	<b>PH-123L-40</b>	<b>344576</b>	C. SHARON			\$0.00	\$0.00	\$0.00		\$0.00
<b>PH-150 PREPARATORY PHYSICS, 3 CREDITS</b> This course is intended for students who have not completed high-school physics, but are intending to take either PH-201 or PH-211. Students will develop reasoning skills, and learn problem-solving strategies, measurement units, graph interpretation, and basic physics definitions needed for their General Physics courses. <b>Prerequisite or Corequisite:</b> MTH-112Z or placement in MTH-251Z										
OC LCT	<b>PH-150-01</b>	<b>344578 TTH</b>	G. BOSTROM			\$390.00	\$39.00	\$20.00	<b>10-11:20 AM</b>	\$449.00
<b>PH-203 GENERAL PHYSICS, 5 CREDITS</b> A lab course covering thermodynamics, fluids, waves, geometrical optics, wave optics, and modern physics. <b>Prerequisites:</b> PH-202 <b>Corequisites:</b> PH-203L and PH-203S										
OC	<b>PH-203-01</b>	<b>344581 MW</b>	E. ALHATMI			\$650.00	\$65.00	\$50.00	<b>11-12:20 PM</b>	\$765.00
Corequisite: Take 2 of the following PH-203S-01, PH-203L-01, PH-203L-02, PH-203L-03, PH-203L-04.										
<b>PH-203L GENERAL PHYSICS LAB, 0 CREDIT</b> Lab course for PH-203 <b>Corequisites:</b> PH-203 and PH-203S										
OC	<b>PH-203L-01</b>	<b>344582 T</b>	E. ALHATMI			\$0.00	\$0.00	\$0.00	<b>9-11:50 AM</b>	\$0.00
Corequisite: Take the following PH-203-01, PH-203S-01.										
OC	<b>PH-203L-02</b>	<b>344583 T</b>	E. ALHATMI			\$0.00	\$0.00	\$0.00	<b>1-3:50 PM</b>	\$0.00
Corequisite: Take the following PH-203-01, PH-203S-01.										
OC	<b>PH-203L-03</b>	<b>344584 TH</b>	E. ALHATMI			\$0.00	\$0.00	\$0.00	<b>1-3:50 PM</b>	\$0.00
Corequisite: Take the following PH-203-01, PH-203S-01.										
OC	<b>PH-203L-04</b>	<b>348022 F</b>	G. BOSTROM			\$0.00	\$0.00	\$0.00	<b>11-1:50 PM</b>	\$0.00
Corequisite: Take the following PH-203S-01, PH-203-01.										
<b>PH-203S GENERAL PHYSICS SEMINAR, 0 CREDIT</b> Seminar course for PH-203 <b>Corequisites:</b> PH-203 and PH-203L										
OC	<b>PH-203S-01</b>	<b>344585 MW</b>	E. ALHATMI			\$0.00	\$0.00	\$0.00	<b>12:25 -12:50 PM</b>	\$0.00
Corequisite: Take 2 of the following PH-203L-01, PH-203L-02, PH-203L-03, PH-203-01, PH-203L-04.										
<b>PH-213 GENERAL PHYSICS WITH CALCULUS, 5 CREDITS</b> A lab course covering thermodynamics, fluids, waves, geometrical optics, wave optics, and modern physics. <b>Prerequisites:</b> PH-212 <b>Corequisites:</b> PH-213L and PH-213S										
OC	<b>PH-213-01</b>	<b>344587 MW</b>	G. BOSTROM			\$650.00	\$65.00	\$50.00	<b>11-12:20 PM</b>	\$765.00
Corequisite: Take 2 of the following PH-213S-01, PH-213S-02, PH-213S-03, PH-213L-01, PH-213L-02, PH-213L-03, PH-213L-04.										
OC	<b>PH-213-02</b>	<b>344589 MW</b>	G. BOSTROM			\$650.00	\$65.00	\$50.00	<b>1-2:20 PM</b>	\$765.00
Corequisite: Take 2 of the following PH-213S-01, PH-213S-02, PH-213S-03, PH-213L-01, PH-213L-02, PH-213L-03, PH-213L-04.										
<b>PH-213L GENERAL PHYSICS WITH CALCULUS LAB, 0 CREDIT</b> Lab course for PH-213 <b>Corequisites:</b> PH-213 and PH-213S										
OC	<b>PH-213L-01</b>	<b>344591 T</b>	E. ALHATMI			\$0.00	\$0.00	\$0.00	<b>9-11:50 AM</b>	\$0.00
Corequisite: Take 2 of the following PH-213S-01, PH-213S-02, PH-213S-03, PH-213-01, PH-213-02.										
OC	<b>PH-213L-02</b>	<b>344593 T</b>	E. ALHATMI			\$0.00	\$0.00	\$0.00	<b>1-3:50 PM</b>	\$0.00
Corequisite: Take 2 of the following PH-213S-01, PH-213S-02, PH-213S-03, PH-213-01, PH-213-02.										
OC	<b>PH-213L-03</b>	<b>344595 TH</b>	E. ALHATMI			\$0.00	\$0.00	\$0.00	<b>1-3:50 PM</b>	\$0.00
Corequisite: Take 2 of the following PH-213S-01, PH-213S-02, PH-213S-03, PH-213-01, PH-213-02.										

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**ESPAÑOL:** Enseñado en español  
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Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total
Instructor				Tuition Fee	Crs. Fee	
OC	<b>PH-213L-04 348023 F</b> G. BOSTROM Corequisite: Take 2 of the following PH-213S-01, PH-213S-02, PH-213S-03, PH-213-01, PH-213-02.			\$0.00 \$0.00	\$0.00	\$0.00
<b>PH-213S</b>	<b>GENERAL PHYSICS WITH CALCULUS SEMINAR, 0 CREDIT</b>					
Seminar course for PH-213						
<b>Corequisites:</b> PH-213 and PH-213L						
OC	<b>PH-213S-01 344596 T</b> G. BOSTROM Corequisite: Take 2 of the following PH-213-01, PH-213-02, PH-213L-01, PH-213L-02, PH-213L-03, PH-213L-04.			\$0.00 \$0.00	\$0.00	\$0.00
OC	<b>PH-213S-02 344597 TH</b> G. BOSTROM Corequisite: Take 2 of the following PH-213-01, PH-213-02, PH-213L-01, PH-213L-02, PH-213L-03, PH-213L-04.			\$0.00 \$0.00	\$0.00	\$0.00
OC	<b>PH-213S-03 344598 F</b> G. BOSTROM Corequisite: Take 2 of the following PH-213-01, PH-213-02, PH-213L-01, PH-213L-02, PH-213L-03, PH-213L-04.			\$0.00 \$0.00	\$0.00	\$0.00

## Political Science

### PS-200 INTRODUCTION TO POLITICAL SCIENCE, 4 CREDITS

A general introduction to the field of political science. Introduces and expands on basic political concepts and themes, explores political theory and ideology, and considers the dynamics of political institutions and government and how both are integrated into political life.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

ONL NCT	<b>PS-200-01 344651</b> J. HITE			\$520.00 \$52.00	\$0.00	\$572.00
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### PS-201 AMERICAN GOVERNMENT AND POLITICS, 4 CREDITS

Examines the founding principles of the American government, as well as the Constitution, the separation of powers, and the three branches of government, political parties and elections, and the role of interest groups and the media in the political process. In addition, assesses the growing power of the executive branch, the expansion and reach of the federal bureaucracy, governmental policies, and the civil liberties and civil rights of American citizens.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

ONL NCT	<b>PS-201-01 348002</b> J. HITE			\$520.00 \$52.00	\$0.00	\$572.00
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### PS-280 POLITICAL SCIENCE/CWE, 2-6 CREDITS (VAR)

Cooperative work experience. Provides students with on-the-job work experience in the field of political science. Required: Student Petition.

**Corequisites:** CWE-281

OC NCT	<b>PS-280-01 344655</b> J. HITE D. LOUGEE Required: Student Petition. Corequisite: Take the following CWE-281-06.			\$780.00 \$78.00	\$45.00	\$903.00V
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## Psychology

### PSY-101 HUMAN RELATIONS, 3 CREDITS

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**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total
Instructor				Tuition Fee	Crs. Fee	
Focuses on developing skills and strategies necessary to build and maintain successful personal and professional relationships. Applies psychological principles to understanding relationships with ourselves and others in social, workplace, and digital contexts. Includes an overview of basic psychology principles in addition to skill development in the following areas: dealing with emotions, interpersonal communication, developing close relationships, resolving conflicts, and managing stress. Includes individual and group activities, lecture, and discussions with an emphasis on student participation.						
<b>Recommended Prerequisites:</b> WRD-090 or placement in WRD-098						
OC NCT	<b>PSY-101-01 344657 MW</b> E. SAUBER			\$390.00 \$39.00	\$0.00	\$429.00
OC NCT	<b>PSY-101-02 344662 TTH</b> M. MALLATT			\$390.00 \$39.00	\$0.00	\$429.00
ONL NCT	<b>PSY-101-03 344663</b> M. MALLATT			\$390.00 \$39.00	\$0.00	\$429.00
ONL	<b>PSY-101-04 344664</b> K. KRASKA			\$390.00 \$39.00	\$0.00	\$429.00

### PSY-201Z INTRODUCTION TO PSYCHOLOGY I, 4 CREDITS

Introduction to the science and application of psychology. Emphasis will be placed on psychological concepts, theories, and principles related to: Research Methods, Behavioral Neuroscience, Consciousness, Sensation/Perception, Learning, Memory, Thinking and Intelligence, and related topics.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

OC NCT	<b>PSY-201Z-01 344665 MW</b> J. KISSLER			\$520.00 \$52.00	\$0.00	\$572.00
OC NCT	<b>PSY-201Z-02 344666 MW</b> J. KISSLER			\$520.00 \$52.00	\$0.00	\$572.00
ONL	<b>PSY-201Z-03 344668</b> S. TOBIN			\$520.00 \$52.00	\$0.00	\$572.00

### PSY-202Z INTRODUCTION TO PSYCHOLOGY II, 4 CREDITS

Introduction to the science and application of psychology. Emphasis will be placed on psychological concepts, theories, and principles related to: Personality, Social Psychology, Health and Well-Being, Motivation and Emotion, Disorders, Therapies, Lifespan Development, and related topics.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

OC NCT	<b>PSY-202Z-01 344669 TTH</b> J. KISSLER			\$520.00 \$52.00	\$0.00	\$572.00
OC NCT	<b>PSY-202Z-02 344670 TTH</b> J. KISSLER			\$520.00 \$52.00	\$0.00	\$572.00

### PSY-215 INTRODUCTION TO DEVELOPMENTAL PSYCHOLOGY, 4 CREDITS

Research and theories regarding the development of the individual from conception to death, including physical, social and cognitive changes.

**Prerequisite or Corequisite:** WRD-098 or placement in WR-121Z

**Recommended Prerequisite or Corequisite:** FYE-101

OC HYB	<b>PSY-215-01 344671 T</b> S. KISER			\$520.00 \$52.00	\$0.00	\$572.00
ONL NCT	<b>PSY-215-02 344673</b> I. MANCINELLI-FRANCONI			\$520.00 \$52.00	\$0.00	\$572.00
ONL NCT	<b>PSY-215-03 344675</b> T. THOMAS			\$520.00 \$52.00	\$0.00	\$572.00
ONL	<b>PSY-215-04 344676</b> J. BENNETT			\$520.00 \$52.00	\$0.00	\$572.00

5-week class meets 3/30-5/1.

Course No	Course Title, Credits						
Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time				
Instructor	Tuition	Fee	Crs. Fee	Total			
<b>PSY-219</b>	<b>INTRODUCTION TO PSYCHOLOGICAL DISORDERS, 4 CREDITS</b>						
Introduction to clinical psychology, including common mental health concerns and approaches to treatment.							
<b>Prerequisite or Corequisite:</b> WRD-098 or placement in WR-121Z							
OC NCT	<b>PSY-219-01</b>	<b>344678 MW</b>	<b>8-9:50 AM</b>				
	E. SAUBER	\$520.00	\$52.00	\$0.00	\$572.00		
OC NCT	<b>PSY-219-02</b>	<b>344680 TTH</b>	<b>1-2:50 PM</b>				
	E. SAUBER	\$520.00	\$52.00	\$0.00	\$572.00		
ONL	<b>PSY-219-03</b>	<b>344682</b>					
	S. KISER	\$520.00	\$52.00	\$0.00	\$572.00		

**PSY-231 INTRODUCTION TO HUMAN SEXUALITY, 4 CREDITS**

Introduction to research and theories of human sexual behavior, including: sexual relationships, communication and intimacy, sex roles, the development of gender, social trends regarding sexuality, human sexual response, biology of sexuality, and conception.

**Prerequisite or Corequisite:** WRD-098 or placement in WR-121Z

OC NCT	<b>PSY-231-01</b>	<b>345536 TTH</b>	<b>10-11:50 AM</b>				
	E. SAUBER	\$520.00	\$52.00	\$0.00	\$572.00		

**PSY-280 PSYCHOLOGY/CWE, 2-6 CREDITS (VAR)**

Cooperative work experience. This course allows students to engage in real-world learning and apply their academic knowledge in the field of psychology. Required: Student Petition.

**Corequisites:** CWE-281

OC NCT	<b>PSY-280-01</b>	<b>344683</b>					
	J. KISSLER	\$780.00	\$78.00	\$45.00	\$903.00V		
Required: Student Petition. Corequisite: Take the following CWE-281-06.							

## Religion

**R-101 JUDAISM AND FOUNDATIONS OF RELIGION, 4 CREDITS**

An introduction to religious topics, meaning of sacred, the nature of myth and story, ideas of God/god, ancient religions, and Judaism.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

ONL	<b>R-101-01</b>	<b>344688</b>					
	J. SHELTON	\$520.00	\$52.00	\$0.00	\$572.00		

**R-210 WORLD RELIGIONS, 4 CREDITS**

Examines religions and philosophies from around the world through film, text, and/or online presentations. Introduces Hinduism, Buddhism, Chinese/Japanese religions, Christianity, Judaism, Islam, and many other religious systems.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

ONL	<b>R-210-01</b>	<b>344691</b>					
	J. SHELTON	\$520.00	\$52.00	\$0.00	\$572.00		

**R-212 HISTORY OF THE NEW TESTAMENT, 4 CREDITS**

An introduction to the New Testament that includes the first century social, political, and religious influences on the New Testament texts, the life of Jesus, the Pauline letters, and other early Christian writings.

**Recommended Prerequisites:** WRD-090 or placement in WRD-098

ONL	<b>R-212-01</b>	<b>344693</b>					
	J. SHELTON	\$520.00	\$52.00	\$0.00	\$572.00		

**R-280 RELIGION/CWE, 2-6 CREDITS (VAR)****Campus Locations:**

**HAR:** Harmony Community Campus  
**OC:** Oregon City Campus  
**WILS:** Wilsonville Training Center  
**OFF:** Other Off-Campus Location

**Distance Education Notification:**

**ONL:** Online Only  
**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

**Other Coding Translations:**

**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español

**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

Course No	Course Title, Credits						
Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time				
Instructor	Tuition	Fee	Crs. Fee	Total			
Cooperative work experience. Provides students with on-the-job work experience in the field of religion. Required: Student Petition.							
<b>Corequisites:</b> CWE-281							
OC NCT	<b>R-280-01</b>	<b>344696</b>					
	D. LOUGEE	\$780.00	\$78.00	\$45.00	\$903.00V		
	J. SHELTON						
Required: Student Petition. Corequisite: Take the following CWE-281-06.							

## Renewable Energy Technology

*All degree seeking students should arrange to speak to a faculty advisor prior to registering. Call 503-594-3318 for more information, or contact Advising, 503-594-3475.*

**RET-211 RENEWABLE ENERGY II: SYSTEM FUNDAMENTALS, 3 CREDITS**

This course in renewable systems will provide in-depth understanding of the technology, economics and policies relevant to each type of energy source. Analysis techniques to evaluate renewable energy applications from a systems design and selection perspective will be presented. Topics include physical operating principles, theoretical vs. actual system output, energy storage, efficiency and cost analysis. Includes hands-on lab exercises.

**Prerequisites:** RET-209

OC	<b>RET-211-01</b>	<b>344600 MW</b>	<b>9-11:50 AM</b>				
	S. PAVEY	\$390.00	\$39.00	\$131.25	\$560.25		

**RET-213 RENEWABLE ENERGY III: INSTALLATION & MAINTENANCE, 3 CREDITS**

The third in a series of technical courses, Renewable Energy III: Installation and Maintenance will provide an introduction to installation and maintenance of renewable energy systems for commercial and residential installations. Students will apply their knowledge of electro-mechanical systems to the application of these systems. Topics covered will include site survey, site preparation, building codes, measurement tools, preventative maintenance and worksite safety. Includes hands-on lab exercises.

**Prerequisites:** RET-211

OC	<b>RET-213-01</b>	<b>348011 TTH</b>	<b>1-3:50 PM</b>				
	S. PAVEY	\$390.00	\$39.00	\$131.25	\$560.25		

**RET-215 RENEWABLE ENERGY IV: SYSTEMS DESIGN, 3 CREDITS**

This fourth course in the series will concentrate on systems design for renewable energy applications. Students will work together and apply concepts to evaluate, design and select one or more renewable energy systems for solar, wind or micro-hydro installations. Topics will include site surveys, structural elements, electrical generators, energy storage and electrical inversion.

**Prerequisites:** RET-213

OC	<b>RET-215-01</b>	<b>348005 TTH</b>	<b>9-11:50 AM</b>				
	S. PAVEY	\$390.00	\$39.00	\$131.25	\$560.25		

**RET-217 RENEWABLE ENERGY CAPSTONE PROJECT, 3 CREDITS**

Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
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This final class in the Renewable Energy series will concentrate on a capstone project. Students will evaluate a proposal for an alternative energy solution and then design an installation to meet the needs of the proposal. Students will be expected to perform a site survey, quantify energy requirements, select appropriate technologies, calculate the payback period and finally fabricate an actual or conceptual energy solution where appropriate.

**Prerequisites:** RET-215

OC	<b>RET-217-01</b>	<b>344602 MW</b>			<b>1-4:00 PM</b>					
	S. PAVEY		\$390.00	\$39.00	\$131.25	\$560.25				

### RET-220 SCADA FUNDAMENTALS, 3 CREDITS

This course will introduce Supervisory Control and Data Acquisition (SCADA) to monitor and control industrial and renewable energy applications. Students will evaluate, design, and select one or more technologies for remote monitoring and actuation. Topics may include networking, hardware considerations, programming, monitoring systems, relays, motors, driver circuits, and electronics. Includes hands-on lab exercises.

**Prerequisites:** RET-200

OC	<b>RET-220-01</b>	<b>348100 TBA</b>								
	M. BABCOCK		\$390.00	\$39.00	\$131.25	\$560.25				

### RET-240 ALTERNATIVE FUELS, 4 CREDITS

Offers students familiarity and entry level skills to work with alternative fuel systems. Explores (technically, economically and ecologically) the following alternative fuels: bio-diesel, vegetable oils, electricity, ethanol, hydrogen, propane, methanol, natural gas, heat engines, fuel cell & hybrid vehicles.

OC	<b>RET-240-01</b>	<b>348101 MW</b>			<b>9-11:50 AM</b>					
	J. CARLSTON		\$520.00	\$52.00	\$175.00	\$747.00				

### RET-280 RENEWABLE ENERGY/CWE, 1-12 CREDITS

Cooperative work experience. Major emphasis on work-based learning experience in the renewable energy field. Coordination of instruction and evaluation of student job performance will be provided by college faculty in conjunction with the student's employer/supervisor. Required: Student Petition.

**Corequisites:** CWE-281

ONL	<b>RET-280-01</b>	<b>344604</b>								
	S. PAVEY		\$1,560.00	\$156.00	\$570.00	\$2,286.00V				
			0							
	Required: Student Petition. Corequisite: Take the following CWE-281-06.									

## Small Business Development Center

Registration for these workshops does not require college admission. E-mail [bizcenter@clackamas.edu](mailto:bizcenter@clackamas.edu) for online registration instructions.

For more information on these classes or other questions regarding your small business needs, contact the Small Business Development Center (SBDC) at 503-594-0738. Website: [www.oregonsbdc.org/clackamas](http://www.oregonsbdc.org/clackamas)

### SBM-010 REAL ESTATE BROKER LICENSE, 0 CREDIT

Prepares students to qualify for the Oregon Real Estate Broker's License exam by studying statutes, rules and anti-discrimination laws pertaining to the licensing and professional real estate activity required by all licensees of the State of Oregon.

REM	<b>SBM-010-01SP</b>	<b>348053 TH</b>			<b>6-9:00 PM</b>					
	TBA	S			9-5:00 PM					

### SBM-011 PROPERTY MANAGEMENT PRE-LICENSE, 0 CREDIT

Prepares students to qualify for the Oregon Real Estate Property Management License exam by studying laws and statutes pertaining to the licensing and professional property management activity required by all licensees of the State of Oregon.

REM	<b>SBM-011-01SP</b>	<b>348054 T</b>			<b>6-8:00 PM</b>					
	TBA									

### XSBM-0003 GOING INTO BUSINESS, 0 CREDIT

Going Into Business orientation introduces the steps you need to take to start-up and successfully operate a small business in Oregon. Before you go too far, find out what it takes to start up your own business. This workshop will help you assess whether business ownership is the right path for you. Discover what resources are available to you for researching, starting-up, financing, and managing your new business.

REM	<b>XSBM-0003-01SP</b>	<b>348050 TH</b>			<b>6:30 -9:30 PM</b>					
	J. SELBY									
REM	<b>XSBM-0003-02SP</b>	<b>348051 TH</b>			<b>6:30 -9:30 PM</b>					
	J. SELBY									
REM	<b>XSBM-0003-03SP</b>	<b>348052 TH</b>			<b>6:30 -9:30 PM</b>					
	J. SELBY									

### XSBM-0005 GOING OUT OF BUSINESS, 0 CREDIT

This is a class that helps a business owner begin understanding steps involved in transitioning their business. There are many considerations both for the owner, family members/heirs, employees, customers and vendors as well as the community.

REM	<b>XSBM-0005-01SP</b>	<b>348045 TH</b>			<b>6:30 -8:30 PM</b>					
	D. TOURNEY									
REM	<b>XSBM-0005-02SP</b>	<b>348046 TH</b>			<b>6:30 -8:30 PM</b>					
	D. TOURNEY									

### XSBM-0010 PREPARING FOR THE CCB EXAM, 0 CREDIT

This class will prepare students to qualify for and successfully pass the Construction Contractors Board (CCB) exam required for contractor certification in Oregon. The class is taught by a certified CCB education provider and fulfills the CCB pre-exam educational requirement as stipulated under Oregon Revised Statute 701.280.

HAR	<b>XSBM-0010-30SP</b>	<b>348038 THF</b>			<b>8-5:00 PM</b>					
		THF			11-1:30 PM					
		THF			3:30 -5:00 PM					
	O. FERRER									

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#### Other Coding Translations:

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**VAR:** Variable credit class

#### ESPAÑOL: Enseñado en español

**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

## Course Listing

2026/SP

Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
HAR	XSBM-0010-31SP	348039	THF					8-5:00 PM		
			THF					11-1:30 PM		
			THF					3:30 -5:00 PM		
	O. FERRER									
HAR	XSBM-0010-32SP	348040	THF					8-5:00 PM		
			THF					11-1:30 PM		
			THF					3:30 -5:00 PM		
	O. FERRER									
HAR	XSBM-0010-33SP	348035	THF					8-5:00 PM		
			THF					11-1:30 PM		
			THF					3:30 -5:00 PM		
	TBA									
HAR	XSBM-0010-34SP	348036	THF					8-5:00 PM		
			THF					11-1:30 PM		
			THF					3:30 -5:00 PM		
	TBA									
XSBM-0011	QUICKBOOKS PRO: PART I, 0 CREDIT									
Learn how to set up and use QuickBooks. Students enter company, customer and vendor information, produce invoices, accept payments, make deposits and pay bills using QuickBooks.										
HAR	XSBM-0011-22SP	348042	W					6-9:00 PM		
	C. WEESNER									
XSBM-0012	QUICKBOOKS PRO: PART II, 0 CREDIT									
In this continuation class, topics include creating and customizing forms and reports, basic job costing, memorizing transactions and reconciling bank and credit card statements.										
HAR	XSBM-0012-22SP	348043	S					9-5:00 PM		
	C. WEESNER									
XSBM-0024	CONSTRUCTION BUSINESS FUNDAMENTALS: ACCURATE ESTIMATING & FINANCIAL RECORDS, 0 CREDIT									
This class is designed to help those students who have successfully completed the Preparing for the CCB Exam class gain a basic understanding of recordkeeping and entry level estimating practices.										
ONL	XSBM-0024-40SP	348041								
	D. TOURNEY									

## Sociology

### SOC-204Z INTRODUCTION TO SOCIOLOGY, 4 CREDITS

Introduces the central concepts, theories, and methods that define the sociological approach to investigating the social forces that shape our lives. Topics may include social structure, culture, socialization, race, class, gender, sexuality, and inequality.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

OC HYB	SOC-204Z-01	344700	W					10-11:50 AM		
	E. PFEIFER			\$520.00	\$52.00	\$0.00		\$572.00		
OC HYB	SOC-204Z-02	344702	TH					1-2:50 PM		
	E. PFEIFER			\$520.00	\$52.00	\$0.00		\$572.00		

### SOC-205Z SOCIAL CHANGE AND INSTITUTIONS, 4 CREDITS

Sociological analysis of social institutions, such as family, education, health care, the economy, and the state. Includes an examination of connections among institutions and their impact on patterns of inequality and individual outcomes. Examines the forces and dynamics behind social change, such as social movements, culture, economic forces, technologies, and the environment.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

ONL LCT	SOC-205Z-01	344709								
	J. LOVELESS			\$520.00	\$52.00	\$0.00		\$572.00		

### SOC-206Z SOCIAL PROBLEMS, 4 CREDITS

Applies the sociological perspective to the study of social problems, including their social construction, causes, and consequences. Explores the complexities surrounding their solutions, such as how solutions are socially constructed and policy proposals from sociologists and social movements. Topics may include poverty, discrimination, interpersonal violence, crime, addiction, ecological crises, war/global conflict, and health inequality.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

OC HYB	SOC-206Z-01	344714	TH					10-11:50 AM		
	E. PFEIFER			\$520.00	\$52.00	\$0.00		\$572.00		
OC HYB	SOC-206Z-02	345537	W					1-2:50 PM		
	E. PFEIFER			\$520.00	\$52.00	\$0.00		\$572.00		

### SOC-207 SOCIAL STRATIFICATION & SOCIAL SYSTEMS, 4 CREDITS

This course explores the inequality that exists in our society. Social stratification is the unequal distribution of resources and opportunities in a society. Issues like gender, race, poverty, education and capitalism will be explored and discussed in an attempt to understand their impact on the inequality that we experience in our society. Various sociological theories will be introduced and utilized to explore and enhance our understanding of these issues.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

ONL LCT	SOC-207-01	345333								
	J. LOVELESS			\$520.00	\$52.00	\$0.00		\$572.00		

### SOC-210 MARRIAGE, FAMILY, & INTIMATE RELATIONS, 4 CREDITS

This course will introduce students to the study of marriage, intimate relations and family systems from the sociological viewpoint. Students will examine the ways in which race, class, gender, sexuality, community, and society influence patterns of courtship, intimate relations, marriage, and family, and explore the various challenges facing families today.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

ONL NCT	SOC-210-01	344712								
	J. LOVELESS			\$520.00	\$52.00	\$0.00		\$572.00		

### SOC-280 SOCIOLOGY/CWE, 2-6 CREDITS (VAR)

Cooperative work experience. This course allows students who are already working in the field of sociology to earn college credit for that work. Required: Student Petition.

**Corequisites:** CWE-281

OC NCT	SOC-280-01	344716								
	E. PFEIFER			\$780.00	\$78.00	\$45.00		\$903.00V		
Required: Student Petition. Corequisite: Take the following CWE-281-06.										

## Statistics

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**ESPAÑOL:** Enseñado en español  
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Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
Instructor									
<b>STAT-243Z</b>	<b>ELEMENTARY STATISTICS I, 4 CREDITS</b>								
A first course in statistics focusing on the interpretation and communication of statistical concepts. Introduces exploratory data analysis, descriptive statistics, sampling methods and distributions, point and interval estimates, hypothesis tests for means and proportions, and elements of probability and correlation. Technology will be used when appropriate.									
<b>Prerequisites:</b> MTH-105Z or higher with a C or better, or placement in STAT-243Z									
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z									
OC NCT	<b>STAT-243Z-01 344737 TTH</b>						<b>10-11:50 AM</b>		
	M. PRICE				\$520.00	\$52.00	\$20.00		\$592.00
OC NCT	<b>STAT-243Z-02 344741 MW</b>						<b>10-11:50 AM</b>		
	M. YANNOTTA				\$520.00	\$52.00	\$20.00		\$592.00
OC NCT	<b>STAT-243Z-03 344742 MW</b>						<b>1-2:50 PM</b>		
	T. BIEBER				\$520.00	\$52.00	\$20.00		\$592.00
ONL NCT	<b>STAT-243Z-10 344745</b>								
	K. AMREIN				\$520.00	\$52.00	\$20.00		\$592.00

## Theatre Arts

<b>TA-103</b>	<b>APPRECIATION OF THEATRE, 4 CREDITS</b>
Students will analyze the many aspects of theatre arts at an advanced level by attending multiple area productions. Plays will be reviewed and evaluated through writing assignments and discussions.	
<b>Recommended Prerequisites:</b> WRD-090 or placement in WR-121Z. TA-101 and TA-102	
ONL	<b>TA-103-01 347980</b>
	A. MOON
	\$520.00 \$52.00 \$110.00 \$682.00

<b>TA-113</b>	<b>FUNDAMENTALS OF TECHNICAL THEATRE, 4 CREDITS</b>
Third class in a three-part series. Advanced study and practice in techniques of mounting various types of productions for presentation. Includes basic principles and techniques in stage design, construction, and lighting. Flexible laboratory sessions available. Students must attend a performance as well as participate in the focus and strike (10 total hours) of a production. Students are required to maintain a journal/study (12 total hours) of outside class activity and observations of Technical Theatre applications.	
OC LCT	<b>TA-113-01 343842 TTH</b>
	C. WHITTEN
	\$520.00 \$52.00 \$35.00 \$607.00

<b>TA-123</b>	<b>COSTUMING III, 3 CREDITS</b>
Third in a three-part series. Study and practice in theatrical costuming techniques for various types of live theatrical productions. Students will analyze scripts, research historical background, and study period fashion to develop character wardrobes. This is a project-based course where students will construct and tailor costume and prop pieces for cast members. No experience necessary; limited seats.	
<b>Recommended Prerequisites:</b> TA-121 or TA-122	
OC LCT	<b>TA-123-01 343850 MW</b>
	A. MCFARLAND
	\$390.00 \$39.00 \$0.00 \$429.00

<b>TA-143</b>	<b>ACTING III, 4 CREDITS</b>
Further studies the methods, techniques, and theories of acting as an art form. Workshop, discussion, and performance of exercises and monologues/scenes from dramatic literature with written assignments to include response and analysis papers. Advanced work on vocal and physical skills with special focus on character and creation of material. Third in a series.	

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**ESPAÑOL:** Enseñado en español  
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Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
Instructor									
<b>Recommended Prerequisites:</b> WRD-098, and TA-141 or TA-142									
OC LCT	<b>TA-143-01 343852 MW</b>						<b>10-11:50 AM</b>		
	A. MOON				\$520.00	\$52.00	\$35.00		\$607.00
<b>TA-153</b>	<b>THEATRE REHEARSAL &amp; PERFORMANCE, 1-3 CREDITS (VAR)</b>								
Training in theatre production through intensive study and rehearsal of scenes and plays for public performance. May be repeated for up to 9 credits. Required: Student Petition.									
<b>Required:</b> Successful audition/interview									
<b>Recommended Prerequisite or Corequisite:</b> TA-141 and TA-142, or TA-143; or TA-111 and TA-112, or TA-113									
OC NCT	<b>TA-153-01 343857 MWF</b>						<b>3-5:50 PM</b>		
	A. MOON				\$390.00	\$39.00	\$25.00		\$454.00V
	Required: Student Petition.								
<b>TA-195</b>	<b>STUDENT PERFORMANCE SHOWCASE, 1-3 CREDITS (VAR)</b>								
Training in special forms of theatrical presentation through in-class intensive preparation, study, and program development for public presentation, including comedy improvisation, stand-up comedy, and student directed one-act plays. Roles in one-act plays require a successful audition. Other opportunities open to all. May be repeated for up to 9 credits.									
OC NCT	<b>TA-195-01 343866 MWF</b>						<b>12-2:50 PM</b>		
	A. MCFARLAND				\$390.00	\$39.00	\$35.00		\$464.00V
	A. MOON								
	Meets: Improv 12-12:50PM, One-Acts 1-1:50PM, Stand-Up 2-2:50pm.								
<b>TA-213</b>	<b>TECHNICAL THEATRE STUDY, 4 CREDITS</b>								
Third class in a three-part series. Comprehensive study and practice in presentational graphics, scene design, with specific focus in lighting design and chromatics. The full creative process of staging a production with be explored through aesthetic research and design projects. Includes hands-on participation in CCC's main stage productions. Students must participate in the focus, performance and strike (10 total hours) of a production. Students are required to maintain a journal/study (12 total hours) of outside class activity identifying and observing Technical Theatre applications.									
<b>Prerequisites:</b> TA-111, TA-112, and TA-113									
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z									
OC LCT	<b>TA-213-01 343872 TTH</b>						<b>1-3:50 PM</b>		
	C. WHITTEN				\$520.00	\$52.00	\$35.00		\$607.00
<b>TA-253</b>	<b>THEATRE REHEARSAL &amp; PERFORMANCE, 1-3 CREDITS (VAR)</b>								
Intermediate training in theatre production through intensive study and rehearsal of scenes and plays for public performance. May be repeated for up to 6 credits. Required: Student Petition.									
<b>Required:</b> Successful audition/interview									
<b>Recommended Prerequisites:</b> TA-153									
OC NCT	<b>TA-253-01 343876 MWF</b>						<b>3-5:50 PM</b>		
	A. MOON				\$390.00	\$39.00	\$25.00		\$454.00V
	Required: Student Petition.								
<b>TA-280</b>	<b>THEATRE/CWE, 2-6 CREDITS</b>								
Cooperative work experience. Provides students with a learning experience related to course of study and career goal. Major emphasis will be given to on-the-job experience and training. Required: Student Petition.									

Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Time	Crs. Fee	Total
<b>Corequisites:</b> CWE-281										
ONL NCT	<b>TA-280-01 343881</b> C. WHITTEN Required: Student Petition.					\$780.00	\$78.00	\$45.00		\$903.00V
<b>TA-295</b>	<b>STUDENT PERFORMANCE SHOWCASE, 1-3 CREDITS (VAR)</b> Training in special forms of theatrical performance techniques through in-class intensive preparation, study, and program development for public presentation, including, but not limited to, comedy improvisation, stand-up comedy, and student directed one-act plays. Roles in one-act plays require a successful audition. Other opportunities open to all. May be repeated for up to 6 credits. <b>Prerequisites:</b> TA-195									
OC NCT	<b>TA-295-01 343891 MWF</b> A. MCFARLAND Meets: Improv 12-12:50pm, One-Acts 1-1:50pm, Stand-Up 2-2:50pm.					\$390.00	\$39.00	\$35.00		\$464.00V
<b>XATH-0001</b>	<b>PLAYS &amp; REHEARSALS, 0 CREDIT</b> Training in theatre production through intensive study and rehearsal of scenes and plays for public performance.									
OC	<b>XATH-0001-01 347978 MWF</b> A. MOON					\$0.00	\$0.00	\$35.00		\$35.00
<b>XATH-0002</b>	<b>STAGECRAFT, 0 CREDIT</b> Training in special forms of theatrical presentation through in-class intensive preparation, study and program development for public presentation to the community.									
OC	<b>XATH-0002-01 347979 MWF</b> A. MOON					\$0.00	\$0.00	\$35.00		\$35.00
<b>Water &amp; Environmental Technology</b>										
<b>WET-030</b>	<b>WASTEWATER OPERATIONS III, 3 CREDITS</b> For professional upgrade only. Does not meet the requirements for the certificate or degree. Design, operation, process control and maintenance of treatment facilities. Current treatment processes discussed in detail with particular attention given to biological sludge handling process. <b>Prerequisites:</b> WET-020									
OC	<b>WET-030-01 344614 M</b> M. LAFORCE					\$390.00	\$39.00	\$15.00		\$444.00
<b>WET-031</b>	<b>WATER TREATMENT, 3 CREDITS</b> For professional upgrade only. Does not meet the requirements for the certificate or degree. Design, operation and process control of water treatment plants. Includes water chemistry, related math, coagulation, sedimentation, filtration and disinfection procedures. Review for Oregon Operator certification exams.									
OC	<b>WET-031-01 344615 T</b> J. NURMI					\$390.00	\$39.00	\$15.00		\$444.00
<b>WET-108</b>	<b>CROSS-CONNECTION CONTROL PROGRAM SPECIALIST, 3 CREDITS</b> Specialized training for those who want to be involved in administering cross-connection control programs. Elements of a cross-connection control program, basic hydraulics, state specific regulations, identifying possible cross-connections and site surveys in order to determine proper type of backflow protection, if needed.									
OC	<b>WET-108-01 344617 TWTHF</b> J. NURMI Meets: 6/9-6/12.					\$390.00	\$39.00	\$0.00		\$429.00
<b>WET-109</b>	<b>BACKFLOW ASSEMBLY OPERATION AND TESTING, 4 CREDITS</b> Lecture course with hands on activities that focuses on backflow assembly hydraulics, operations, installation, and testing.									
OC	<b>WET-109-01 344619 MTWTHF</b> M. LAFORCE Required: Student Petition. Meets: 4/6-4/10.					\$520.00	\$52.00	\$0.00		\$572.00
OC	<b>WET-109-02 344621 MTWTHF</b> M. LAFORCE Required: Student Petition. Meets: 6/8-6/12.					\$520.00	\$52.00	\$0.00		\$572.00
<b>WET-130</b>	<b>WASTEWATER OPERATIONS III, 4 CREDITS</b> Design, operation, process control and maintenance of treatment facilities. Current treatment processes discussed in detail with particular attention given to biological sludge treatment, and handling processes. Lab includes field trips to local wastewater facilities. <b>Prerequisites:</b> WET-120 <b>Corequisites:</b> WET-130L									
OC	<b>WET-130-01 344622 M</b> M. LAFORCE					\$520.00	\$52.00	\$40.00		\$612.00
<b>WET-130L</b>	<b>WASTEWATER OPERATIONS III LAB, 0 CREDIT</b> The course is devoted to comprehension of the wastewater treatment process via weekly exploration of a wastewater treatment plant. We will tour a treatment plant and then go over the treatment process in lecture. We will emphasis emerging wastewater technologies, (nitrification/denitrification), sludge and bio-solids management, volatile solids reduction through the digestion (aerobic and anaerobic) processes, sludge/solids processing, solids handling, and ultimate waste solids disposal. Fundamental principles of emerging wastewater treatment process, solids handling, including disinfection and dechlorination of wastewater will be emphasized. <b>Prerequisites:</b> WET-110 and WET-120 <b>Corequisites:</b> WET-130									
OC	<b>WET-130L-01 344624 M</b> M. LAFORCE					\$0.00	\$0.00	\$0.00		\$0.00
<b>WET-131</b>	<b>WATER TREATMENT, 4 CREDITS</b> Design, operation and process control of water treatment plants. Includes water chemistry, related math, coagulation, flocculation, sedimentation, filtration and disinfection procedures. Review for Oregon Operator grade 1 certification exams. Lab includes field trips to local water treatment facilities. <b>Prerequisites:</b> WET-121 <b>Corequisites:</b> WET-131L									
OC	<b>WET-131-01 344626 T</b> J. NURMI					\$520.00	\$52.00	\$40.00		\$612.00
<b>WET-131L</b>	<b>WATER TREATMENT LAB, 0 CREDIT</b> Lab course for WET-131									

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**Other Coding Translations:**  
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**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

Course No	Course Title, Credits	Section No	Instructor	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Tuition	Fee	Crs. Fee	Total
<b>Prerequisites:</b> WET-121									
<b>Corequisites:</b> WET-131									
oc	<b>WET-131L-01</b>	<b>344627 T</b>	J. NURMI			\$0.00	\$0.00	\$0.00	\$0.00
<b>WET-132 COLLECTION &amp; DISTRIBUTION LAB, 1 CREDIT</b>									
Field exposure to water distribution systems and wastewater collection systems. Weekly field visits include inspection of cross-connection inspection, distribution valving, reservoirs, water metering/repair, pumping station operations, smoke testing, and CCTV.									
oc	<b>WET-132-01</b>	<b>344628 M</b>	M. LAFORCE			\$130.00	\$13.00	\$35.00	\$178.00
<b>WET-134 ENVIRONMENTAL CHEMISTRY II, 3 CREDITS</b>									
Water quality testing, monitoring and reporting. The course includes the theory and application of common water quality tests for surface water, groundwater, and storm water monitoring systems. The course also covers all water quality tests for ensuring correct water treatment processes.									
<b>Prerequisites:</b> WET-123									
oc	<b>WET-134-01</b>	<b>344629 W</b>	J. NURMI			\$390.00	\$39.00	\$50.00	\$479.00
<b>WET-180 WATER &amp; ENVIRONMENTAL PROJECTS I, 5 CREDITS</b>									
Cooperative work experience. Practical work experience in a municipal industrial treatment, distribution, or collection system. Placement in consulting firms, federal and state regulatory agencies, BLM, BPA, and other regulated governmental organizations.									
<b>Corequisites:</b> CWE-281									
ONL	<b>WET-180-01</b>	<b>344630</b>	M. LAFORCE			\$650.00	\$65.00	\$45.00	\$760.00
Corequisite: Take the following CWE-281-02.									
<b>XWET-C001</b>	<b>1-DAY CROSS CONNECTION SPECIALIST UPDATE, 0.70 CEUS</b>								
Update on code information or any changes in the program.									
oc	<b>XWET-C001-31</b>	<b>344773 F</b>	J. NURMI			\$0.00	\$0.00	\$0.00	\$0.00
Registration for this section is on our Eventbrite Page. Meets: 5/8. Fee: \$100 Register at <a href="https://ccc-wet.eventbrite.com/">ccc-wet.eventbrite.com/</a> Contact Amber Steele at <a href="mailto:amber.steele@clackamas.edu">amber.steele@clackamas.edu</a> with questions.									
<b>XWET-C002</b>	<b>1-DAY TESTER RENEWAL, 0.70 CEUS</b>								
Update on OARs and hands on testing to recertify student for backflow assembly certification through the State of Oregon.									
oc	<b>XWET-C002-11</b>	<b>344776 F</b>	M. LAFORCE			\$0.00	\$0.00	\$0.00	\$0.00
Meets: 5/1 in person. Fee: \$100. Register at <a href="https://ccc-wet.eventbrite.com/">ccc-wet.eventbrite.com/</a> Contact Amber Steele at <a href="mailto:amber.steele@clackamas.edu">amber.steele@clackamas.edu</a> with questions.									
<b>XWET-C003</b>	<b>2-DAY TESTER RETRAIN/RENEWAL, 1.40 CEUS</b>								
Review of backflow prevention assemblies used for water/wastewater system cross connection control. Review will include overview of hydraulics and degree of hazards, proper backflow installation procedures, and approved testing/troubleshooting procedures. Students will learn to identify common, actual, and potential cross connection hazards; students will be introduced to the basic requirements for carrying out a cross connection program. Upon successful hands on and written exam completion, students will be issued certificate of completion by OBT/CCC and transcribed for appropriate number of CEUs. Students will be able to apply to Oregon Health Department for recertification by that agency.									
oc	<b>XWET-C003-21</b>	<b>344780 THF</b>	M. LAFORCE			\$0.00	\$0.00	\$0.00	\$0.00
Meets: 5/14-5/15 in person Fee: \$200. Register at <a href="https://ccc-wet.eventbrite.com/">ccc-wet.eventbrite.com/</a> Contact Amber Steele at <a href="mailto:amber.steele@clackamas.edu">amber.steele@clackamas.edu</a> with questions.									
<b>XWET-C004</b>	<b>4-DAY CROSS CONNECTION SPECIALIST COURSE, 3.20 CEUS</b>								
Designed to provide information to individuals involved in the protection of public water systems from contamination due to cross connections. This course should be of special interest to cross connection control specialists, plumbing inspectors, waterworks managers, and backflow device testers.									
oc	<b>XWET-C004-41</b>	<b>344783 TWTHF</b>	J. NURMI			\$0.00	\$0.00	\$0.00	\$0.00
Meets: 6/9-6/12 Fee: \$400. Register at <a href="https://ccc-wet.eventbrite.com/">ccc-wet.eventbrite.com/</a> Contact Amber Steele at <a href="mailto:amber.steele@clackamas.edu">amber.steele@clackamas.edu</a> with questions.									
<b>XWET-C005</b>	<b>5-DAY BACKFLOW TESTER COURSE, 4.00 CEUS</b>								
Presentation of backflow prevention assemblies used for water/wastewater system cross connection control. Class will include overview of hydraulics and degree of hazards, proper backflow installation procedures, and approved testing/troubleshooting procedures. Students will learn to identify common, actual, and potential cross connection hazards; students will be introduced to the basic requirements for carrying out a cross connection program. Students will be able to apply to Oregon Health Authority for Certification by that agency.									
oc	<b>XWET-C005-51</b>	<b>344786 MTWTHF</b>	M. LAFORCE			\$0.00	\$0.00	\$0.00	\$0.00
Meets: 4/6/2026-4/10/2026 in person Fee: \$500. Register at <a href="https://ccc-wet.eventbrite.com/">ccc-wet.eventbrite.com/</a> Contact Amber Steele at <a href="mailto:amber.steele@clackamas.edu">amber.steele@clackamas.edu</a> with questions.									
oc	<b>XWET-C005-52</b>	<b>344788 MTWTHF</b>	M. LAFORCE			\$0.00	\$0.00	\$0.00	\$0.00
Meets 6/8/2026-6/12/2026 Fee: \$500 Registration for this course is on our Eventbrite Page. Register at <a href="https://ccc-wet.eventbrite.com/">ccc-wet.eventbrite.com/</a> Contact Amber Steele at <a href="mailto:amber.steele@clackamas.edu">amber.steele@clackamas.edu</a> with questions.									

## Welding Technology

Meets: 4/28-5/12 in person Fee: \$200. Register at [ccc-wet.eventbrite.com/](https://ccc-wet.eventbrite.com/) Contact Amber Steele at [amber.steele@clackamas.edu](mailto:amber.steele@clackamas.edu) with questions.

## Welding Technology

*Must have ANSI approved eye protection first day and comply with College safety policy.*

### WLD-100 WELDER'S PRINT READING I, 3 CREDITS

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## Course Listing

2026/SP

Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total
		Instructor		Tuition Fee	Crs. Fee	
	Provides instruction in reading and interpretation of prints and symbols common in the welding industry. Participants will learn the interpretation and application of basic lines, dimensions, structural shapes, and specifications. Welding symbols and their application to different types of joint configurations will be covered, as well as how to develop basic shop drawings and prints.					
OC	<b>WLD-100-01 344632 TH</b>				<b>2-4:50 PM</b>	
	D. PODKOWA		\$390.00	\$39.00	\$219.00	\$648.00
OC	<b>WLD-100-02 344634 T</b>				<b>6-8:50 PM</b>	
	D. PODKOWA		\$390.00	\$39.00	\$219.00	\$648.00

### WLD-102 INTRODUCTION TO WELDING, 2 CREDITS

Designed for the beginner and experimental welder. Includes: oxy-acetylene cutting and welding, SMAW (Shielded Metal Arc Welding), GMAW & FCAW (Gas Metal Arc Welding & Flux Core Arc Welding) and GTAW (Gas Tungsten Arc Welding) and plasma arc cutting.

OC NCT	<b>WLD-102-01 344635 F</b>				<b>6-9:50 PM</b>	
	A. TOWN		\$260.00	\$26.00	\$146.00	\$432.00
OC NCT	<b>WLD-102-02 344638 S</b>				<b>9-12:50 PM</b>	
	K. DRURY		\$260.00	\$26.00	\$146.00	\$432.00
OC NCT	<b>WLD-102-03 344640 S</b>				<b>2-5:50 PM</b>	
	K. DRURY		\$260.00	\$26.00	\$146.00	\$432.00

### WLD-102ES INTRODUCCIÓN A LA SOLDADURA, 2 CREDITS

Diseñado para soldaderos principiantes y experimental. Incluye corte y soldadura oxiacetileno, soldadura por arco de metal blindado (SMAW), la soldadura de arco de metal y gas (GMAW) y Soldadura por Arco con Nucleo de Fundente (FCAW) y soldadura por arco de gas tungsteno (GTAW) y corte por plasma.

OC LCT ESPAÑOL	<b>WLD-102ES-01 344641 S</b>				<b>6-9:50 PM</b>	
	F. PAXTOR		\$260.00	\$26.00	\$146.00	\$432.00

### WLD-103 BLACKSMITHING & TRADITIONAL IRON WORKING, 2 CREDITS

This course introduces the student to basic blacksmithing techniques and processes, as well as terminology, steel types, heat treating and tool making. Multiple projects allow the student to practice the varied methods of manual metal forming. No welding experience required.

OC LCT	<b>WLD-103-01 344642 F</b>				<b>6-9:50 PM</b>	
	M. TIZO		\$260.00	\$26.00	\$146.00	\$432.00
OC LCT	<b>WLD-103-02 345484 SU</b>				<b>10-1:50 PM</b>	
	M. TIZO		\$260.00	\$26.00	\$146.00	\$432.00

### WLD-110 WELDER CERTIFICATION, 4 CREDITS

This course provides theory and practical instruction to become a certified welder. Students will choose a welding process (flux core arc welding, shielded metal arc welding, or gas tungsten arc welding) for certification. Material needed for practice welding will be provided. Students will take a welding certification exam at the end of the class. May be repeated for up to 12 credits. Required: Student Petition.

OC NCT	<b>WLD-110-01 344644 MW</b>				<b>8-11:50 AM</b>	
	D. PODKOWA		\$520.00	\$52.00	\$432.00	\$1,004.00
	Required: Student Petition.					
OC NCT	<b>WLD-110-02 344647 MW</b>				<b>1-4:50 PM</b>	
	R. THOMAS		\$520.00	\$52.00	\$432.00	\$1,004.00
	Required: Student Petition.					
OC NCT	<b>WLD-110-03 344648 MW</b>				<b>6-9:50 PM</b>	
	M. TIZO		\$520.00	\$52.00	\$432.00	\$1,004.00
	Required: Student Petition.					

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Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total
		Instructor		Tuition Fee	Crs. Fee	
OC NCT	<b>WLD-110-04 344650 TTH</b>				<b>8-11:50 AM</b>	
	D. BATES		\$520.00	\$52.00	\$432.00	\$1,004.00
	Required: Student Petition.					
OC NCT	<b>WLD-110-05 344652 TTH</b>				<b>6-9:50 PM</b>	
	B. MULLIGAN		\$520.00	\$52.00	\$432.00	\$1,004.00
	Required: Student Petition.					
OC NCT	<b>WLD-110-06 344654 TTH</b>				<b>1-4:50 PM</b>	
	B. MULLIGAN		\$520.00	\$52.00	\$432.00	\$1,004.00
	Required: Student Petition.					
OC	<b>WLD-110-07 347961 TTH MW</b>				<b>12:01 -1:50 AM</b> <b>10-11:59 PM</b>	
	K. DRURY		\$520.00	\$52.00	\$432.00	\$1,004.00
	Required: Student Petition.					

### WLD-111 SHIELDED METAL ARC WELDING (STICK), 8 CREDITS

Provides students with the opportunity to acquire knowledge and skills to set up and operate equipment to perform fillet and groove welds in all positions with the SMAW process. Oxy-fuel cutting, air carbon arc cutting and gouging will be covered. Welding codes, standards, and specifications will be reviewed.

OC	<b>WLD-111-01 344656 MTWTH</b>				<b>8-11:50 AM</b>	
	R. THOMAS		\$1,040.00	\$104.00	\$584.00	\$1,728.00

### WLD-111A SHIELDED METAL ARC WELDING (STICK), 4 CREDITS

The first half of WLD-111 which provides the opportunity to acquire knowledge and skills to set up and operate equipment to perform fillet welds in flat and horizontal positions with the SMAW process. Oxy-fuel cutting, air carbon arc cutting and gouging will be covered.

OC	<b>WLD-111A-01 344658 MW</b>				<b>8-11:50 AM</b>	
	R. THOMAS		\$520.00	\$52.00	\$292.00	\$864.00

### WLD-111B SHIELDED METAL ARC WELDING (STICK), 4 CREDITS

The second half of WLD-111 which provides the opportunity to acquire additional knowledge and skills needed to perform more advanced fillet and groove welds in vertical and overhead positions with the SMAW process. Welding codes, standards, and specifications will be reviewed.

**Prerequisites:** WLD-111A

OC	<b>WLD-111B-01 344659 TTH</b>				<b>8-11:50 AM</b>	
	R. THOMAS		\$520.00	\$52.00	\$292.00	\$864.00

### WLD-113 GAS METAL ARC WELDING/FLUX CORE ARC WELDING (WIREFEED), 8 CREDITS

Provides students with the opportunity to acquire knowledge and skills to set up and operate equipment to perform fillet and groove welds in all positions with the Gas Metal Arc and Flux Core Arc Welding processes. Oxy-fuel cutting, and air carbon arc cutting and gouging will be covered. Welding codes, standards and specifications will be reviewed.

OC NCT	<b>WLD-113-01 344660 TWTHF</b>				<b>12:01 -1:50 AM</b> <b>10-11:59 PM</b>	
	K. DRURY		\$1,040.00	\$104.00	\$584.00	\$1,728.00

### WLD-113A GAS METAL ARC WELDING/FLUX CORE ARC WELDING (WIREFEED), 4 CREDITS

The first half of WLD-113 which provides the opportunity to acquire knowledge and skills to set up and operate equipment to perform fillet welds in flat and horizontal positions with the Gas Metal Arc and Flux Core Arc Welding processes. Oxy-fuel cutting, air carbon arc cutting and gouging will be covered.



Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total
Instructor	Tuition	Fee	Crs. Fee			
OC NCT	<b>WLD-113A-01 344667 TTH</b>				<b>12:01 -1:50 AM</b>	
	<b>MW</b>				<b>10-11:59 PM</b>	
	K. DRURY	\$520.00	\$52.00	\$292.00	\$864.00	

### WLD-113B GAS METAL ARC WELDING/FLUX CORE ARC WELDING (WIREFEED), 4 CREDITS

The second half of WLD-113 which provides the opportunity to acquire additional knowledge and skills needed to perform more advanced fillet and groove welds in vertical and overhead positions with the Gas Metal Arc and Flux Core Arc Welding processes. Welding codes, standards, and specifications will be reviewed.

**Prerequisites:** WLD-113A

OC NCT	<b>WLD-113B-01 344672 TTH</b>				<b>10-11:59 PM</b>	
	<b>WF</b>				<b>12:01 -1:50 AM</b>	
	K. DRURY	\$520.00	\$52.00	\$292.00	\$864.00	

### WLD-115 GAS TUNGSTEN ARC WELDING (GTAW), 8 CREDITS

Provides students with the opportunity to acquire knowledge and skills to set up and operate equipment to perform fillet and groove welds in all positions with the Gas Tungsten Arc Welding process. Plasma arc cutting will be covered. Welding codes, standards, and specifications will be reviewed.

OC	<b>WLD-115-01 344674 MTWTH</b>				<b>6-9:50 PM</b>	
	J. PHELPS	\$1,040.00	\$104.00	\$584.00	\$1,728.00	

### WLD-115A GAS TUNGSTEN ARC WELDING (GTAW), 4 CREDITS

The first half of WLD-115 which provides the opportunity to acquire knowledge and skills to set up and operate equipment to perform fillet welds in flat and horizontal positions with the Gas Tungsten Arc Welding (GTAW) process. Plasma arc cutting will be covered.

OC	<b>WLD-115A-01 344679 MW</b>				<b>6-9:50 PM</b>	
	J. PHELPS	\$520.00	\$52.00	\$292.00	\$864.00	
OC	<b>WLD-115A-02 344681 MTWTH</b>				<b>7:30 -9:20 AM</b>	
	R. ABBOTT	\$520.00	\$52.00	\$292.00	\$864.00	
OC	<b>WLD-115A-02A 347962 MTWTH</b>				<b>7:30 -9:20 AM</b>	
	R. ABBOTT	\$520.00	\$52.00	\$292.00	\$864.00	
	Required: Student Petition. CTE Pathways section, For more information contact HS Connections 503-594-3161.					
OC	<b>WLD-115A-03 344685 MTWTH</b>				<b>1:15 -3:05 PM</b>	
	R. ABBOTT	\$520.00	\$52.00	\$292.00	\$864.00	
OC	<b>WLD-115A-03A 347963 MTWTH</b>				<b>1:15 -3:05 PM</b>	
	R. ABBOTT	\$520.00	\$52.00	\$292.00	\$864.00	
	Required: Student Petition. CTE Pathways section, For more information contact HS Connections 503-594-3161.					
OC	<b>WLD-115A-04 344687 MTWTH</b>				<b>3:30 -5:20 PM</b>	
	MTWTH				<b>3:50 -5:20 PM</b>	
	R. ABBOTT	\$520.00	\$52.00	\$292.00	\$864.00	
OC	<b>WLD-115A-04A 347964 MTWTH</b>				<b>3:30 -5:20 PM</b>	
	R. ABBOTT	\$520.00	\$52.00	\$292.00	\$864.00	
	Required: Student Petition. CTE Pathways section, For more information contact HS Connections 503-594-3161.					

### WLD-115B GAS TUNGSTEN ARC WELDING (GTAW), 4 CREDITS

The second half of WLD-115 which provides the opportunity to acquire additional knowledge and skills needed to perform more advanced fillet and groove welds in vertical and overhead positions with the Gas Tungsten Arc Welding process. Welding codes, standards, and specifications will be reviewed.

Course No	Course Title, Credits	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Total
Instructor	Tuition	Fee	Crs. Fee			
<b>Prerequisites: WLD-115A</b>						
OC	<b>WLD-115B-01 344690 TTH</b>				<b>6-9:50 PM</b>	
	J. PHELPS	\$520.00	\$52.00	\$292.00	\$864.00	
OC	<b>WLD-115B-02 344692 MTWTH</b>				<b>7:30 -9:20 AM</b>	
	R. ABBOTT	\$520.00	\$52.00	\$292.00	\$864.00	
OC	<b>WLD-115B-02A 347965 MTWTH</b>				<b>7:30 -9:20 AM</b>	
	R. ABBOTT	\$520.00	\$52.00	\$292.00	\$864.00	
	Required: Student Petition. CTE Pathways section, For more information contact HS Connections 503-594-3161.					
OC	<b>WLD-115B-03 344695 MTWTH</b>				<b>1:15 -3:05 PM</b>	
	R. ABBOTT	\$520.00	\$52.00	\$292.00	\$864.00	
OC	<b>WLD-115B-03A 347966 MTWTH</b>				<b>1:15 -3:05 PM</b>	
	R. ABBOTT	\$520.00	\$52.00	\$292.00	\$864.00	
	Required: Student Petition. CTE Pathways section, For more information contact HS Connections 503-594-3161.					
OC	<b>WLD-115B-04 344698 MTWTH</b>				<b>3:30 -5:20 PM</b>	
	MTWTH				<b>3:50 -5:20 PM</b>	
	R. ABBOTT	\$520.00	\$52.00	\$292.00	\$864.00	
OC	<b>WLD-115B-04A 347967 MTWTH</b>				<b>3:30 -5:20 PM</b>	
	R. ABBOTT	\$520.00	\$52.00	\$292.00	\$864.00	
	Required: Student Petition. CTE Pathways section, For more information contact HS Connections 503-594-3161.					

### WLD-150 WELDING PROCESSES, 4 CREDITS

Covers oxy-fuel welding, brazing, cutting, SMAW (Shielded Metal Arc Welding), GMAW & FCAW (Gas Metal Arc Welding & Flux Core Arc Welding) and GTAW (Gas Tungsten Arc Welding) and plasma arc cutting and plasma cutting. This course includes safety, electrical fundamentals, routine maintenance, minor repairs, and welding terms and definitions.

OC LCT	<b>WLD-150-01 344701 MW</b>				<b>6-9:50 PM</b>	
	M. TIZO	\$520.00	\$52.00	\$292.00	\$864.00	
OC LCT	<b>WLD-150-02 344704 MW</b>				<b>8-11:50 AM</b>	
	D. PODKOWA	\$520.00	\$52.00	\$292.00	\$864.00	

### WLD-200 WELDER'S PRINT READING II, 3 CREDITS

Provides instruction in reading and interpretation of prints and symbols common in welding industry. Participants will learn interpretation and application of blueprint views. Includes basic layout techniques and math review. American Welding Society symbols, International Standards Organization symbols, pipe welding symbols, and inspection symbols are covered.

**Prerequisites:** WLD-100

OC	<b>WLD-200-01 344705 T</b>				<b>2-4:50 PM</b>	
	D. PODKOWA	\$390.00	\$39.00	\$219.00	\$648.00	

### WLD-203 BLACKSMITHING & TRADITIONAL IRON WORKING II, 2 CREDITS

This course builds on WLD-103 and expands on the process of forged metal work. Instruction includes treadle hammer use, tooling design, traditional joinery, and intermediate projects. Welding experience helpful, but not required.

OC	<b>WLD-203-02 347968 SU</b>				<b>10-1:50 PM</b>	
	M. TIZO	\$260.00	\$26.00	\$146.00	\$432.00	

### WLD-210 PIPE WELDING, 4 CREDITS

**Campus Locations:**  
**HAR:** Harmony Community Campus  
**OC:** Oregon City Campus  
**WILS:** Wilsonville Training Center  
**OFF:** Other Off-Campus Location

**Distance Education Notification:**  
**ONL:** Online Only  
**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

**Other Coding Translations:**  
**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

Course No	Course Title, Credits					
Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time			
Instructor		Tuition	Fee	Crs. Fee	Total	

Provides beginning theory and practical instruction in the Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux Core Arc Welding (FCAW), or Gas Tungsten Arc Welding (GTAW) processes on steel plate and pipe. The specific projects include: stringer beads, fillet and groove welds on plate with root and cover proficiency, pipe cutting using the oxy-fuel process, pipe beveling and groove welds on pipes in all positions. The student may choose which process or processes will be used to complete the lab assignments.

**Prerequisites:** WLD-111, or WLD-111A and WLD-111B, WLD-113, or WLD-113A and WLD-113B, WLD-115, or WLD-115A and WLD-115B, WLD-150 or prior experience in SMAW, GMAW, FCAW, or GTAW

OC NCT	<b>WLD-210-01</b>	<b>344706 MW</b>		<b>1-4:50 PM</b>		
	R. THOMAS	\$520.00	\$52.00	\$292.00	\$864.00	
	Required: Student Petition.					

#### WLD-211 ADVANCED SHIELDED METAL ARC WELDING, 4 CREDITS

This course provides the opportunity for students to acquire the knowledge and skills needed to perform quality fillet and groove welds in all positions using the Shielded Metal Arc Welding (SMAW) process. Advanced welding theory and procedures will also be included.

**Prerequisites:** WLD-111; or WLD-111A and WLD-111B

oc	<b>WLD-211-01</b>	<b>344707 TTH</b>		<b>8-11:50 AM</b>		
	D. BATES	\$520.00	\$52.00	\$292.00	\$864.00	

#### WLD-212 SHIELDED METAL ARC WELDING PIPE WELDING, 4 CREDITS

This class is designed to teach students the fundamentals of open root pipe welding. Theory and practical instruction in open root V groove pipe welding using E6010 and E7018 electrodes will be provided. Oxy-fuel pipe cutting is also included. Required: Student Petition.

**Prerequisites:** WLD-211

OC LCT	<b>WLD-212-01</b>	<b>344710 MW</b>		<b>1-4:50 PM</b>		
	R. THOMAS	\$520.00	\$52.00	\$292.00	\$864.00	
	Required: Student Petition.					

#### WLD-215 ADVANCED GAS TUNGSTEN ARC WELDING, 4 CREDITS

This course provides the opportunity for students to acquire the knowledge and skills needed to perform quality fillet and groove welds in all positions using the Gas Tungsten Arc Welding (GTAW) process. Advanced welding theory and procedures will also be included.

**Prerequisites:** WLD-115; or WLD-115A and WLD-115B

OC NCT	<b>WLD-215-01</b>	<b>344711 TTH</b>		<b>6-9:50 PM</b>		
	B. MULLIGAN	\$520.00	\$52.00	\$292.00	\$864.00	

#### WLD-250 WELDING FABRICATION I BEGINNING PROJECT, 4 CREDITS

This course consists of lecture and lab and provides instruction in fabrication techniques including blueprint reading, layout, sketching, bills of material, job cost calculations, measuring, fitting, cutting and welding. Students will be assigned beginning fabrication projects. The student will be responsible for all aspects of managing the project to successful completion.

**Prerequisites:** WLD-111, WLD-111A and WLD-111B, WLD-113, WLD-113A and WLD-113B, WLD-115, or WLD-115A and WLD-115B

OC NCT	<b>WLD-250-01</b>	<b>344713 TTH</b>		<b>1-4:50 PM</b>		
	B. MULLIGAN	\$520.00	\$52.00	\$292.00	\$864.00	

#### WLD-251 WELDING FABRICATION II INTERMEDIATE PROJECT, 4 CREDITS

This course consists of lecture and lab. Students will use the skills learned in WLD-250, such as blueprint reading, layout, sketching, bills of materials, job cost calculations, measuring, fitting, cutting and welding, and apply them to more challenging projects. Students will be assigned intermediate fabrication projects. The student will be responsible for all aspects of managing the project to successful completion.

**Prerequisites:** WLD-250

OC NCT	<b>WLD-251-01</b>	<b>344715 TTH</b>		<b>1-4:50 PM</b>		
	B. MULLIGAN	\$520.00	\$52.00	\$292.00	\$864.00	

#### WLD-252 WELDING FABRICATION III ADVANCED PROJECT, 4 CREDITS

This course consists of lecture and lab. Students will use the skills learned in WLD-250 and WLD-251, such as blueprint reading, layout, sketching, bills of materials, job cost calculations, measuring, fitting, cutting and welding, and apply them to advanced projects. Students will be assigned advanced fabrication projects. The student will be responsible for all aspects of managing the project to successful completion.

**Prerequisites:** WLD-251

OC NCT	<b>WLD-252-01</b>	<b>344717 TTH</b>		<b>1-4:50 PM</b>		
	B. MULLIGAN	\$520.00	\$52.00	\$292.00	\$864.00	

#### WLD-261 WELDING SPECIAL PROJECTS, 1-2 CREDITS (VAR)

Allows students to improve their welding skills while working on instructor-approved projects. May be repeated for up to 12 credits.

OC NCT	<b>WLD-261-01</b>	<b>344719 M</b>		<b>8-11:50 AM</b>		
	R. THOMAS	\$260.00	\$26.00	\$146.00	\$432.00V	
	Required: Student Petition.					

OC NCT	<b>WLD-261-02</b>	<b>344722 M</b>		<b>1-4:50 PM</b>		
	R. THOMAS	\$260.00	\$26.00	\$146.00	\$432.00V	
	Required: Student Petition.					

OC NCT	<b>WLD-261-03</b>	<b>344724 M</b>		<b>6-9:50 PM</b>		
	J. PHELPS	\$260.00	\$26.00	\$146.00	\$432.00V	
	Required: Student Petition.					

OC NCT	<b>WLD-261-05</b>	<b>344726 T</b>		<b>8-11:50 AM</b>		
	R. THOMAS	\$260.00	\$26.00	\$146.00	\$432.00V	
	Required: Student Petition.					

OC NCT	<b>WLD-261-07</b>	<b>344728 T</b>		<b>6-9:50 PM</b>		
	J. PHELPS	\$260.00	\$26.00	\$146.00	\$432.00V	
	Required: Student Petition.					

OC NCT	<b>WLD-261-08</b>	<b>344730 T</b>		<b>10-11:59 PM</b>		
	W			<b>12:01 -1:50 AM</b>		
	K. DRURY	\$260.00	\$26.00	\$146.00	\$432.00V	
	Required: Student Petition.					

OC NCT	<b>WLD-261-09</b>	<b>345485 W</b>		<b>8-11:50 AM</b>		
	R. THOMAS	\$260.00	\$26.00	\$146.00	\$432.00V	
	Required: Student Petition.					

OC NCT	<b>WLD-261-10</b>	<b>344732 W</b>		<b>1-4:50 PM</b>		
	R. THOMAS	\$260.00	\$26.00	\$146.00	\$432.00V	
	Required: Student Petition.					

OC NCT	<b>WLD-261-11</b>	<b>344733 W</b>		<b>6-9:50 PM</b>		
	J. PHELPS	\$260.00	\$26.00	\$146.00	\$432.00V	
	Required: Student Petition.					

OC NCT	<b>WLD-261-13</b>	<b>345487 TH</b>		<b>8-11:50 AM</b>		
	R. THOMAS	\$260.00	\$26.00	\$146.00	\$432.00V	
	Required: Student Petition.					

OC NCT	<b>WLD-261-14</b>	<b>344735 TH</b>		<b>1-4:50 PM</b>		
	B. MULLIGAN	\$260.00	\$26.00	\$146.00	\$432.00V	
	Required: Student Petition.					

OC NCT	<b>WLD-261-15</b>	<b>344736 TH</b>		<b>6-9:50 PM</b>		
	J. PHELPS	\$260.00	\$26.00	\$146.00	\$432.00V	
	Required: Student Petition.					

**Campus Locations:**  
**HAR:** Harmony Community Campus  
**OC:** Oregon City Campus  
**WILS:** Wilsonville Training Center  
**OFF:** Other Off-Campus Location

**Distance Education Notification:**  
**ONL:** Online Only  
**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

**Other Coding Translations:**  
**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español  
**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

Course No	Course Title, Credits						Course No	Course Title, Credits					
	Section No	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Tuition	Fee	Total		Section No	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Tuition	Fee	Total
OC NCT	<b>WLD-261-16</b>	<b>344738 TH</b>											
			<b>F</b>										
	K. DRURY			\$260.00	\$26.00	\$146.00							
	Required: Student Petition.												
OC	<b>WLD-261-19</b>	<b>348347 F</b>											
	M. TIZO			\$260.00	\$26.00	\$146.00							
	Required: Student Petition.												
OC NCT	<b>WLD-261-20</b>	<b>344743 S</b>											
	K. DRURY			\$260.00	\$26.00	\$146.00							
	Required: Student Petition.												
OC NCT	<b>WLD-261-21</b>	<b>344747 S</b>											
	K. DRURY			\$260.00	\$26.00	\$146.00							
	Required: Student Petition.												
OC NCT	<b>WLD-261-23</b>	<b>345490 SU</b>											
	M. TIZO			\$260.00	\$26.00	\$146.00							
	Required: Student Petition.												

**WLD-280 WELDING TECHNOLOGY/CWE, 1-6 CREDITS (VAR)**

Cooperative work experience in the welding trades. Worksites to be determined prior to registering for this class. Skills learned from welding classes will be applied while working at a job site. Goals for this class will be established with the company supervisor, instructor, and student. May be repeated for up to 9 credits. Required: Student Petition.

**Corequisites:** CWE-281

oc	<b>WLD-280-01</b>	<b>344748</b>				
	TBA			\$780.00	\$78.00	\$903.00V
	Required: Student Petition. Corequisite: Take the following CWE-281-06.					

**XWLD-0001 AMERICAN WELDING SOCIETY (WLD) CERTIFICATION 1 PLATE TEST, 0 CREDIT**

Welder certification in accordance with AWS D1.1 for one position for students enrolled in any CCC welding course.

ONL	<b>XWLD-0001-01</b>	<b>344789</b>				
	B. MULLIGAN			\$0.00	\$0.00	\$140.00
	Required: Student Petition.					

**XWLD-0002 AMERICAN WELDING SOCIETY CERTIFICATION 2 PLATE OR 1 PIPE TEST, 0 CREDIT**

Welder certification in any two positions, in accordance with AWS D1.1 for students enrolled in any CCC welding course.

ONL	<b>XWLD-0002-01</b>	<b>344790</b>				
	B. MULLIGAN			\$0.00	\$0.00	\$280.00
	Required: Student Petition.					

**XWLD-0003 AMERICAN WELDING SOCIETY CERTIFICATION RETAKE TEST, 0 CREDIT**

Welder certification on retest in any position, in accordance with AWS D1.1 for students enrolled in any CCC welding course. Required: Student Petition.

ONL	<b>XWLD-0003-01</b>	<b>344792</b>				
	B. MULLIGAN			\$0.00	\$0.00	\$25.00
	Required: Student Petition.					

## Women's Studies

**WS-101 INTRODUCTION TO WOMEN'S STUDIES, 4 CREDITS****Campus Locations:**

**HAR:** Harmony Community Campus  
**OC:** Oregon City Campus  
**WILS:** Wilsonville Training Center  
**OFF:** Other Off-Campus Location

**Distance Education Notification:**

**ONL:** Online Only  
**REM:** Remote (w/ scheduled meetings)  
**HYB:** In-person plus online work

**Other Coding Translations:**

**TBA:** To be arranged: contact department first class  
**VAR:** Variable credit class

**ESPAÑOL:** Enseñado en español

**LCT:** Low-Cost Text  
**NCT:** No-Cost Text

Examines the history of the representation of women, the history of US feminism and the development of Women's Studies as an academic discipline. Critically explores social issues relevant to women's lives, including gender-expression, marginalization, reproduction, sexuality, economic status and the experience of violence.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

OC NCT	<b>WS-101-01</b>	<b>344838 TTH</b>				
	K. SEVERSON			\$520.00	\$52.00	\$0.00
ONL NCT	<b>WS-101-02</b>	<b>344839</b>				
	K. SEVERSON			\$520.00	\$52.00	\$0.00

## World Languages

**ASL-101 FIRST-YEAR AMERICAN SIGN LANGUAGE I, 4 CREDITS**

First term of a three-term introductory course. Everyday communication is the centerpiece of each lesson. Topics revolve around sharing information about ourselves and our environment. Grammar is introduced in context, with an emphasis on developing question and answering skills. Strategies are presented to help the student maintain a conversation.

**Recommended Prerequisites:** WRD-098 or placement in WR-121Z

ONL	<b>ASL-101-01</b>	<b>344134</b>				
	A. ELLIS			\$520.00	\$52.00	\$10.00
	One-time textbook purchase for ASL-101 and ASL-102.					

**ASL-102 FIRST-YEAR AMERICAN SIGN LANGUAGE II, 4 CREDITS**

Second term of a three-term introductory course. Emphasis will be on increasing communicative abilities. Course will focus on language functions such as making requests, describing others, and/or telling a short story. Grammar and vocabulary will also be emphasized throughout the course.

**Prerequisites:** ASL-101 with a C or better

OC	<b>ASL-102-01</b>	<b>344137 MW</b>				
	A. ELLIS			\$520.00	\$52.00	\$10.00
	One-time textbook purchase for ASL-101 and ASL-102.					
ONL	<b>ASL-102-02</b>	<b>345524</b>				
	A. ELLIS			\$520.00	\$52.00	\$10.00
	One-time textbook purchase for ASL-101 and ASL-102.					

**ASL-103 FIRST-YEAR AMERICAN SIGN LANGUAGE III, 4 CREDITS**

Third term of a three-term introductory course. Emphasis will be on developing conversational competence. Course includes basic ASL vocabulary and grammar used for basic communication such as opening conversations, clarifying, giving reasons, narrating family history, correcting, and elaborating.

**Prerequisites:** ASL-102 with a C or better

OC	<b>ASL-103-01</b>	<b>348075 MW</b>				
	A. ELLIS			\$520.00	\$52.00	\$10.00
	One-time textbook purchase for ASL-103 and ASL-201.					

**ASL-203 SECOND-YEAR AMERICAN SIGN LANGUAGE III, 4 CREDITS**

Continuation of ASL-202. Emphasizes active communication in sign language. Increased emphasis on exploring, analyzing the rules, discussing, developing, and presenting literature and poetry in sign language.

**Prerequisites:** ASL-202 with a C or better

REM	<b>ASL-203-01</b>	<b>344140 TTH</b>				
	A. ELLIS			\$520.00	\$52.00	\$10.00
	One-time textbook purchase for ASL-202 and ASL-203.					

Course No Course Title, Credits							Course No Course Title, Credits						
Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Tuition	Fee	Total	Section No	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Time	Tuition	Fee	Total
Instructor							Instructor						
<b>FR-103 FIRST-YEAR FRENCH III, 4 CREDITS</b>							<b>Writing</b>						
Third term of a three-term foundational, multimedia course in beginning French designed to give students basic communicative proficiency in the target language. Students will practice all four skills: listening, speaking, reading, and writing. Special attention will be paid to pronunciation, essential grammar structures, and attendant cultural elements. Student learning is assessed through a variety of guided exercises and assignments, interactive activities, homework, tests and quizzes, and other class projects and participation.							<b>WR-101 WORKPLACE WRITING, 4 CREDITS</b>						
<b>Prerequisites:</b> FR-102							Students in this course learn and practice basic modes of technical writing, including summaries, process analysis, instructions, and reports.						
<b>Prerequisites:</b> WRD-098 or placement in WR-101 or WR-121Z							<b>Prerequisites:</b> WRD-098 or placement in WR-121Z						
OC NCT	FR-103-01	344360	TTH				OC HYB	WR-101-01	344746	M			
	E. HERNANDEZ	\$520.00	\$52.00	\$10.00	\$582.00		NCT	W. DAWKINS	\$520.00	\$52.00	\$19.00	\$591.00	
							ONL NCT	WR-101-02	345544				
								L. ORMANDY	\$520.00	\$52.00	\$19.00	\$591.00	
<b>SPN-101 FIRST-YEAR SPANISH I, 4 CREDITS</b>							<b>WR-121Z COMPOSITION I, 4 CREDITS</b>						
First of a three-term foundational, multimedia course for beginners. Initial emphasis is on speaking and listening comprehension, with secondary emphasis on reading and writing. Important cultural themes are presented. Student learning is assessed through a variety of guided exercises and assignments, interactive activities, homework, tests and quizzes, and other class projects and participation.							WR-121Z engages students in the study and practice of critical thinking, reading, and writing. The course focuses on analyzing and composing across varied rhetorical situations and in multiple genres. Students will apply key rhetorical concepts flexibly and collaboratively throughout their writing and inquiry processes.						
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z							<b>Prerequisites:</b> WRD-098 or placement in WR-121Z						
ONL NCT	SPN-101-01	344718					OC NCT	WR-121Z-01	344752	MW			
	A. METHADZOVIC	\$520.00	\$52.00	\$10.00	\$582.00			J. BEREZHNOY	\$520.00	\$52.00	\$19.00	\$591.00	
<b>SPN-102 FIRST-YEAR SPANISH II, 4 CREDITS</b>							OC NCT	WR-121Z-02	344756	MW			
Second of a three-term foundational, multimedia course for beginners. Initial emphasis is on speaking and listening comprehension, with secondary emphasis on reading and writing. Important cultural themes are presented. Student learning is assessed through a variety of guided exercises and assignments, interactive activities, homework, tests and quizzes, and other class projects and participation.								J. DAVIS	\$520.00	\$52.00	\$19.00	\$591.00	
<b>Prerequisites:</b> SPN-101							OC LCT	WR-121Z-03	344759	MW			
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z								W. DAWKINS	\$520.00	\$52.00	\$19.00	\$591.00	
OC NCT	SPN-102-01	344720	TTH				OC	WR-121Z-04	344762	TTH			
	A. METHADZOVIC	\$520.00	\$52.00	\$10.00	\$582.00			A. ENCINAS	\$520.00	\$52.00	\$19.00	\$591.00	
ONL NCT	SPN-102-02	344721					OC	WR-121Z-05	344765	TTH			
	A. METHADZOVIC	\$520.00	\$52.00	\$10.00	\$582.00			A. ENCINAS	\$520.00	\$52.00	\$19.00	\$591.00	
<b>SPN-103 FIRST-YEAR SPANISH III, 4 CREDITS</b>							OC HYB LCT	WR-121Z-06	344769	M			
Third of a three-term foundational, multimedia course for beginners. Initial emphasis is on speaking and listening comprehension, with secondary emphasis on reading and writing. Important cultural themes are presented. Student learning is assessed through a variety of guided exercises and assignments, interactive activities, homework, tests and quizzes, and other class projects and participation.								S. NIZIOLEK	\$520.00	\$52.00	\$19.00	\$591.00	
<b>Prerequisites:</b> SPN-102							OC HYB	WR-121Z-07	344772	T			
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z							NCT	E. WILDER-TACK	\$520.00	\$52.00	\$19.00	\$591.00	
OC NCT	SPN-103-01	344723	TTH				OC HYB	WR-121Z-08	344774	T			
	A. METHADZOVIC	\$520.00	\$52.00	\$10.00	\$582.00			M. SCHUMACHER	\$520.00	\$52.00	\$19.00	\$591.00	
ONL NCT	SPN-103-02	344729					ONL NCT	WR-121Z-09	344775				
	E. HERNANDEZ	\$520.00	\$52.00	\$10.00	\$582.00			T. DODGE	\$520.00	\$52.00	\$19.00	\$591.00	
<b>SPN-203 SECOND-YEAR SPANISH III, 4 CREDITS</b>							ONL NCT	WR-121Z-10	344777				
Third of a three-term, intermediate, multimedia course. Focus is on speaking, listening comprehension, reading and writing. Explores cultural differences among Spanish-speaking countries and between the latter and European-American culture.								T. DODGE	\$520.00	\$52.00	\$19.00	\$591.00	
<b>Prerequisites:</b> SPN-202							ONL NCT	WR-121Z-11	344779				
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z								R. DAVIS	\$520.00	\$52.00	\$19.00	\$591.00	
ONL NCT	SPN-203-01	344731					ONL NCT	WR-121Z-12	344781				
	V. SHORT	\$520.00	\$52.00	\$10.00	\$582.00			R. DAVIS	\$520.00	\$52.00	\$19.00	\$591.00	
<b>WR-121Z COMPOSITION I, 4 CREDITS</b>							ONL NCT	WR-121Z-13	344782				
WR-121Z engages students in the study and practice of critical thinking, reading, and writing. The course focuses on analyzing and composing across varied rhetorical situations and in multiple genres. Students will apply key rhetorical concepts flexibly and collaboratively throughout their writing and inquiry processes.								R. DAVIS	\$520.00	\$52.00	\$19.00	\$591.00	
<b>Prerequisites:</b> WRD-098 or placement in WR-121Z							HAR NCT	WR-121Z-15	344784	TTH			
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z								J. BEREZHNOY	\$520.00	\$52.00	\$19.00	\$591.00	
OC NCT	WR-121Z-01	344752	MW				HAR HYB	WR-121Z-16	344785	M			
	J. BEREZHNOY	\$520.00	\$52.00	\$19.00	\$591.00			TBA	\$520.00	\$52.00	\$19.00	\$591.00	
OC NCT	WR-121Z-02	344756	MW				<b>WR-122Z COMPOSITION II, 4 CREDITS</b>						
	J. DAVIS	\$520.00	\$52.00	\$19.00	\$591.00		WR-122Z builds on concepts and processes emphasized in WR-121Z, engaging with inquiry, research, and argumentation in support of students' development as writers. The course focuses on composing and revising in research-based genres through the intentional use of rhetorical strategies. Students will find, evaluate, and interpret complex material, including lived experience; use this to frame and pursue their own research questions; and integrate material purposefully into their own compositions.						
OC LCT	WR-121Z-03	344759	MW				<b>Prerequisites:</b> WR-121Z with a C or better						
	W. DAWKINS	\$520.00	\$52.00	\$19.00	\$591.00								
OC	WR-121Z-04	344762	TTH										
	A. ENCINAS	\$520.00	\$52.00	\$19.00	\$591.00								
OC	WR-121Z-05	344765	TTH										
	A. ENCINAS	\$520.00	\$52.00	\$19.00	\$591.00								
OC HYB LCT	WR-121Z-06	344769	M										
	S. NIZIOLEK	\$520.00	\$52.00	\$19.00	\$591.00								
OC HYB	WR-121Z-07	344772	T										
NCT	E. WILDER-TACK	\$520.00	\$52.00	\$19.00	\$591.00								
OC HYB	WR-121Z-08	344774	T										
	M. SCHUMACHER	\$520.00	\$52.00	\$19.00	\$591.00								
ONL NCT	WR-121Z-09	344775											
	T. DODGE	\$520.00	\$52.00	\$19.00	\$591.00								
ONL NCT	WR-121Z-10	344777											
	T. DODGE	\$520.00	\$52.00	\$19.00	\$591.00								
ONL NCT	WR-121Z-11	344779											
	R. DAVIS	\$520.00	\$52.00	\$19.00	\$591.00								
ONL NCT	WR-121Z-12	344781											
	R. DAVIS	\$520.00	\$52.00	\$19.00	\$591.00								
ONL NCT	WR-121Z-13	344782											
	R. DAVIS	\$520.00	\$52.00	\$19.00	\$591.00								
HAR NCT	WR-121Z-15	344784	TTH										
	J. BEREZHNOY	\$520.00	\$52.00	\$19.00	\$591.00								
HAR HYB	WR-121Z-16	344785	M										
	TBA	\$520.00	\$52.00	\$19.00	\$591.00								
<b>Campus Locations:</b>							<b>Distance Education Notification:</b>						
<b>HAR:</b> Harmony Community Campus							<b>ONL:</b> Online Only						
<b>OC:</b> Oregon City Campus							<b>REM:</b> Remote (w/ scheduled meetings)						
<b>WILS:</b> Wilsonville Training Center							<b>HYB:</b> In-person plus online work						
<b>OFF:</b> Other Off-Campus Location							<b>Other Coding Translations:</b>						
							<b>TBA:</b> To be arranged: contact department first class						
							<b>VAR:</b> Variable credit class						
							<b>ESPAÑOL:</b> Enseñado en español						
							<b>LCT:</b> Low-Cost Text						
							<b>NCT:</b> No-Cost Text						



# Course Listing

2026/SP

Course No Course Title, Credits							Course No Course Title, Credits						
Section No	Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Total	Section No	Instructor	Crs Reg.	Days (M,T,W,Th,F,S,SU)	Tuition	Fee	Total
OC	WR-122Z-01	344787	MW				ONL NCT	WR-227Z-05	344816				
	J. DAVIS			\$520.00	\$52.00	\$19.00		L. ORMANDY			\$520.00	\$52.00	\$19.00
OC	WR-122Z-02	344791	MW				HAR HYB NCT	WR-227Z-15	344817	T			
	T. DONNELLY			\$520.00	\$52.00	\$19.00		J. PETERMAN			\$520.00	\$52.00	\$19.00
OC LCT	WR-122Z-03	344793	TTH										
	R. MURPHY			\$520.00	\$52.00	\$19.00							
OC	WR-122Z-04	344794	TTH										
	E. WILDER-TACK			\$520.00	\$52.00	\$19.00							
OC HYB LCT	WR-122Z-05	344796	M										
	C. BURNELL			\$520.00	\$52.00	\$19.00							
OC HYB LCT	WR-122Z-06	344798	M										
	C. BURNELL			\$520.00	\$52.00	\$19.00							
ONL LCT	WR-122Z-07	344799											
	R. MURPHY			\$520.00	\$52.00	\$19.00							
ONL	WR-122Z-08	344800											
	M. SCHUMACHER			\$520.00	\$52.00	\$19.00							
ONL LCT	WR-122Z-09	344801											
	S. WARREN			\$520.00	\$52.00	\$19.00							
ONL NCT	WR-122Z-10	344802											
	S. NIZIOLEK			\$520.00	\$52.00	\$19.00							
ONL	WR-122Z-11	344803											
	H. DIERDORFF			\$520.00	\$52.00	\$19.00							
HAR	WR-122Z-15	344806	MW										
	TBA			\$520.00	\$52.00	\$19.00							
<b>WR-124ES ESCRITURA DE ENSAYOS DE NIVEL UNIVERSITARIO EN ESPAÑOL, 4 CREDITS</b>							<b>WR-240 CREATIVE NONFICTION WRITING I, 4 CREDITS</b>						
Este curso involucra a los estudiantes en el estudio y la práctica del pensamiento crítico, la lectura y la escritura. El curso se centra en el análisis y la composición en diversas situaciones retóricas y en múltiples géneros. Los estudiantes aplicarán conceptos retóricos clave de forma flexible y colaborativa en sus procesos de escritura e indagación.							Techniques of writing and analyzing types of creative nonfiction such as literary journalism, memoirs, nature or science writing, travel writing, and personal essays.						
<b>Required:</b> Estudiantes deben leer y escribir a nivel universitario, en Español, antes de comenzar el curso							<b>Prerequisites:</b> WRD-098 or placement in WR-121Z						
<b>Prerequisites:</b> WRD-098ES o tener un nivel de evaluación de WR-124ES							ONL LCT	WR-240-01	344818				
<b>Recommended Prerequisite or Corequisite:</b> FYE-101ES								T. DODGE			\$520.00	\$52.00	\$19.00
REM ESPAÑOL	WR-124ES-01	347985	T										
	A. ENCINAS			\$520.00	\$52.00	\$19.00							
	Required: Student Petition.												
REM ESPAÑOL	WR-124ES-02	347986	W										
	A. ENCINAS			\$520.00	\$52.00	\$19.00							
<b>WR-227Z TECHNICAL WRITING, 4 CREDITS</b>							<b>WR-242 POETRY WRITING I, 4 CREDITS</b>						
WR-227Z introduces students to producing instructive, informative, and persuasive technical/professional documents aimed at well-defined and achievable outcomes. The course focuses on presenting information using rhetorically appropriate style, design, vocabulary, structure, and visuals. Students can expect to gather, read, and analyze information and to learn a variety of strategies for producing accessible, usable, reader-centered deliverable documents that are clear, concise, and ethical.							Provides the basic skills for writing and revising poems following contemporary trends in form and content; provides a supportive environment and the critical abilities to read and discuss poems confidently.						
<b>Prerequisites:</b> WR-121Z with a C or better							<b>Prerequisites:</b> WRD-098 or placement in WR-121Z						
OC NCT	WR-227Z-01	344812	TTH				OC LCT	WR-242-01	347989	MW			
	J. PETERMAN			\$520.00	\$52.00	\$19.00		A. COFFEY			\$520.00	\$52.00	\$19.00
OC HYB NCT	WR-227Z-02	344813	M										
	S. WARREN			\$520.00	\$52.00	\$19.00							
ONL NCT	WR-227Z-03	344814											
	J. MCALPINE			\$520.00	\$52.00	\$19.00							
ONL NCT	WR-227Z-04	344815											
	A. WARREN			\$520.00	\$52.00	\$19.00							
<b>Campus Locations:</b> HAR: Harmony Community Campus OC: Oregon City Campus WILS: Wilsonville Training Center OFF: Other Off-Campus Location							<b>Distance Education Notification:</b> ONL: Online Only REM: Remote (w/ scheduled meetings) HYB: In-person plus online work						
							<b>Other Coding Translations:</b> TBA: To be arranged: contact department first class VAR: Variable credit class						
							<b>ESPAÑOL:</b> Enseñado en español LCT: Low-Cost Text NCT: No-Cost Text						

Course No Course Title, Credits							Course No Course Title, Credits						
Section No	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Tuition	Fee	Crs. Fee	Total	Section No	Crs Reg.	Days (M,T,W,TH,F,S,SU)	Tuition	Fee	Crs. Fee	Total
Instructor							Instructor						
<b>WRD-090 INTRODUCTORY COLLEGE READING &amp; WRITING 1, 4 CREDITS</b>													
Students discuss a variety of short, pre-college-level readings, and learn a process for developing their own paragraphs and very short essays (up to two pages). Other topics include becoming an independent reader, summarizing, and writing academically.													
<b>Prerequisites:</b> Placement in WRD-090													
OC LCT	<b>WRD-090-01</b>	<b>344822 MW</b>			<b>10-11:50 AM</b>								
	A. COFFEY		\$520.00	\$52.00	\$19.00	\$591.00							
ONL LCT	<b>WRD-090-02</b>	<b>344824</b>											
	A. WARREN		\$520.00	\$52.00	\$19.00	\$591.00							
<b>WRD-098 INTRODUCTORY COLLEGE READING &amp; WRITING 2, 4 CREDITS</b>													
Preparation for writing in college-level courses. Students discuss a variety of early-college-level readings, and develop and refine their own essays (up to three pages) through a process of revision and multiple drafts. Other topics include becoming a confident reader, finding and using information, and giving credit to sources through informal citations.													
<b>Prerequisites:</b> WRD-090 or placement in WRD-098													
OC LCT	<b>WRD-098-01</b>	<b>344827 MW</b>			<b>1-2:50 PM</b>								
	J. PONS		\$520.00	\$52.00	\$19.00	\$591.00							
OC NCT	<b>WRD-098-02</b>	<b>344829 TTH</b>			<b>10-11:50 AM</b>								
	J. DAVIS		\$520.00	\$52.00	\$19.00	\$591.00							
ONL NCT	<b>WRD-098-03</b>	<b>344831</b>											
	M. WARREN		\$520.00	\$52.00	\$19.00	\$591.00							
ONL NCT	<b>WRD-098-04</b>	<b>344833</b>											
	M. WARREN		\$520.00	\$52.00	\$19.00	\$591.00							
HAR LCT	<b>WRD-098-15</b>	<b>344835 MW</b>			<b>6-7:50 PM</b>								
	H. DIERDORFF		\$520.00	\$52.00	\$19.00	\$591.00							
<b>XWR-0001 CHRYSALIS WOMEN WRITERS, 0 CREDIT</b>													
This club is for CCC students and non-students to support the creation of, practice of, and critique of creative writing. An honest and supportive critique group, welcomes both new and established women writers. Newcomers are welcome to attend without reading their own work until they are comfortable doing so. This workshop is led by local author Patricia Lichen.													
OC HYB NCT	<b>XWR-0001-01</b>	<b>344843 W</b>			<b>12-1:50 PM</b>								
	P. LICHEN		\$0.00	\$0.00	\$0.00	\$0.00							
<b>Zoology</b>													
<b>Z-203 GENERAL ZOOLOGY, 4 CREDITS</b>													
A lab course covering diversity of the more complex invertebrate and vertebrate animal phyla. Includes animal anatomy/physiology, animal behavior, distribution, ecology and conservation.													
<b>Prerequisites:</b> MTH-095 with a C or better or placement in MTH-111Z													
<b>Corequisites:</b> Z-203L													
<b>Recommended Prerequisites:</b> WRD-098 or placement in WR-121Z													
oc	<b>Z-203-01</b>	<b>344795 MW</b>			<b>10:30 -11:50 AM</b>								
	J. BOWN		\$520.00	\$52.00	\$55.00	\$627.00							
<b>Z-203L GENERAL ZOOLOGY LAB, 0 CREDIT</b>													
Lab course for Z-203													
<b>Corequisites:</b> Z-203													
oc	<b>Z-203L-01</b>	<b>344797 W</b>			<b>1-3:50 PM</b>								
	J. BOWN		\$0.00	\$0.00	\$0.00	\$0.00							
<b>Campus Locations:</b>				<b>Distance Education Notification:</b>				<b>Other Coding Translations:</b>				<b>ESPAÑOL:</b> Enseñado en español	
<b>HAR:</b> Harmony Community Campus				<b>ONL:</b> Online Only				<b>TBA:</b> To be arranged: contact				<b>LCT:</b> Low-Cost Text	
<b>OC:</b> Oregon City Campus				<b>REM:</b> Remote (w/ scheduled meetings)				<b>department first class</b>				<b>NCT:</b> No-Cost Text	
<b>WILS:</b> Wilsonville Training Center				<b>HYB:</b> In-person plus online work				<b>VAR:</b> Variable credit class					
<b>OFF:</b> Other Off-Campus Location													

# COMMUNITY EDUCATION

Please register directly through the Community Education partner hosting the class you would like to attend.



## Community Partnerships in Action

The Community Education Department proudly supported longtime partner North Clackamas Parks and Recreation with new equipment to enhance their popular aqua aerobics classes.

Through a collaboration with the CCC Foundation, funding from an endowment was provided to strengthen programs designed for adults in the community, helping participants remain active and engaged.

With the purchase of new aqua weights and belts, instructors now have updated tools to

continue offering accessible and enjoyable workouts, and students have already shared their excitement about the fresh burst of energy added to each class session.

This partnership reflects our ongoing commitment to supporting high-quality, community-based programming focused on wellness, learning and connection.

To explore available classes and learn more about opportunities at the North Clackamas Aquatic Park, visit [ncprd.org](http://ncprd.org).

Community Education strives to be a low-cost option for the district, with partners in many locations. Have an idea for a new Community Education class or looking to partner with us? Reach us at [communityeducation@clackamas.edu](mailto:communityeducation@clackamas.edu).

### CANBY

#### Bridging Cultures

503-592-3781 | [www.bridgingculturescanby.org](http://www.bridgingculturescanby.org)

### GLADSTONE

#### Gladstone Community School

503-650-2570 | [www.clackamas.edu/gladstone](http://www.clackamas.edu/gladstone)

### MILWAUKIE

#### Milwaukie Community Center

503-794-8092 | [www.ncprd.com](http://www.ncprd.com)

#### North Clackamas Parks and Recreation

503-794-8080, ext. 0 | [www.ncprd.com](http://www.ncprd.com)

### OREGON CITY

#### Oregon City Community Education

503-785-8520 | <https://ocsd62occe.org>

#### Oregon City Swimming Pool

503-657-8273 | [www.oregoncity.org/904/Aquatics](http://www.oregoncity.org/904/Aquatics)

#### Pioneer Community Center

503-657-8287 | [www.oregoncity.org/499/Pioneer-Community-Center](http://www.oregoncity.org/499/Pioneer-Community-Center)

### TEAM OREGON

#### Motorcycle/Scooter Safety Training

800-545-9944 | [www.team-oregon.org](http://www.team-oregon.org)

### WEST LINN

#### West Linn Parks and Recreation

503-557-4700 | [www.westlinnoregon.gov/parksrec](http://www.westlinnoregon.gov/parksrec)

### WILSONVILLE

#### City of Wilsonville Parks and Recreation

503-783-PLAY | [www.wilsonvilleparksandrec.com/parksrec](http://www.wilsonvilleparksandrec.com/parksrec)

#### West Linn/Wilsonville Family Empowerment Center

503-673-7690 | [www.wlww.k12.or.us/domain/3726](http://www.wlww.k12.or.us/domain/3726)



### Senior Discount

Seniors 62 years of age or older qualify for discounted tuition for many Community Education classes. Proof of age is required.