

ASSOCIATE OF APPLIED SCIENCE DEGREE (AAS)

This program prepares students for a lucrative career in the wastewater treatment field. Students learn to operate machinery used in plants where urban wastewater is treated for release back into the environment. Classes are generally held at the Clark County Sanitation District facilities. Academic skills emphasizing math, science and human relations are stressed to prepare students to meet challenges common in the workplace.

**STUDENT LEARNING OUTCOMES - Graduates of this program will have the opportunity to:**

- Demonstrate an understanding of the fundamentals of waste water treatment and related technologies.
- Demonstrate an understanding of the laws and regulations that apply to waste water treatment.
- Demonstrate an understanding of the various treatment methodologies and technologies applicable to waste water treatment.
- Demonstrate an understanding of pump operation and maintenance for waste water treatment operation.
- Demonstrate knowledge of waste water treatment operations, relevant skills and other core degree requirements adequate to assume entry level supervisory positions in waste water treatment operations.

**GENERAL EDUCATION REQUIREMENTS (25 Credits):**

	CR	SEMESTER
<b>COMMUNICATIONS:</b> BUS 108, COM 101, 102, 215, ENG 100, 101, 102, 107, 113, 114, 205, JOUR 102, THTR 105	3-5	_____
<b>ENGLISH:</b> ENG 100, 101, 107, 113	3-5	_____
<b>HUMAN RELATIONS:</b> ALS 101, ANTH 101, 112, 201, 205, HIST 105, 106, 107, 150, 151, 210, 247, 260, HMS 130, 135B, 265B, MGT 100B, 283, PHIL 135, PSC 201, PSY 101, 102, 207, 208, 261, SOC	3	_____
<b>MATHEMATICS:</b> MATH 120 or above (except MATH 122, 123)	3	_____
<b>SCIENCE:</b> AST, BIOL, CHEM, EGG 131, 132, ENV, GEOG 103, 104, 117, GEOL, HHP 123B, 124B, PHYS	6	_____
<b>FINE ARTS/HUMANITIES/ SOCIAL SCIENCES:</b> AM, ANTH, ART, COM, ECON, ENG 223 or above, GEOG 106 or above, HIST, International Languages, Music, PHIL, PSC, PSY, SOC, THTR, WMST 113	3	_____
<b>U.S. AND NEVADA CONSTITUTIONS:</b> PSC 101 or HIST 101 and HIST 102 or HIST 101 and HIST 217	4-6	_____

**SPECIAL PROGRAM REQUIREMENTS (35 Credits):**

	CR	SEMESTER
<b>ESH 202</b> Environmental Laws and Regulations	3	_____
<b>ESH 215</b> Environmental Computer Applications	3	_____
or <b>GIS 109B</b> Introduction to Geographic Information Systems		
<b>ESH 240B</b> Wastewater Treatment I	3	_____
<b>ESH 241B</b> Wastewater Treatment II	3	_____

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	CR	SEMESTER
<b>ESH 242B</b> Wastewater Treatment III	3	_____
<b>ESH 246B</b> Water/Wastewater Mathematics I	3	_____
<b>ESH 247B</b> Water/Wastewater Mathematics II	3	_____
<b>ESH 248B</b> Water Quality Analysis and Laboratory	4	_____
<b>ESH 250B</b> Pump Operation and Maintenance	3	_____
<b>ESH 251B</b> Current Issues	3	_____
<b>Plus 4 credits from the following:</b>		
<b>BIOL 101</b> General Biology for Non-Majors	4	_____
<b>CHEM 105</b> Chemistry, Man and Society	3	_____
<b>CHEM 110</b> Chemistry for Health Sciences I	4	_____
<b>CHEM 111</b> Chemistry for Health Sciences II	4	_____
<b>CHEM 121</b> General Chemistry I	4	_____
<b>CONS 120B</b> Printreading and Specifications	3	_____
<b>EMS 108B</b> Emergency Medical Technician Training	8	_____
<b>ENV 220</b> Introduction to Ecological Principles	3	_____
<b>ESH 225B</b> Ethics and Legal Issues in Environmental Restoration	3	_____
<b>ESH 230B</b> Radiation Health Physics	3	_____
<b>ESH 235B</b> Asbestos Inspection and Abatement	3	_____
<b>ESH 249B</b> Industrial Pretreatment Programs and Inspection	3	_____
<b>ET 100B</b> Survey of Electronics	3	_____
<b>FT 101</b> Introduction to Fire Science	3	_____
<b>MT 110B</b> Material Science I (Ferrous and Non-Ferrous)	4	_____

**NOTE:** Courses with a B suffix (example - XYZ 123B) may be non-transferable for a NSHE baccalaureate degree. ESHWW-AAS

**60**  
Total Credits

Students may elect to graduate using the degree requirements in effect at the time of matriculation, or when they declared or changed major or the current catalog. If a program is official after a student has matriculated, the student may choose the degree requirements of the new program. In no case may a student use a catalog which is more than six years old at the time of graduation.

ASSOCIATE OF APPLIED SCIENCE

Guided Pathway 2014-2015  
**AAS ENVIRONMENTAL SAFETY AND HEALTH**  
**WASTEWATER TREATMENT**  
 60 Credits

First Semester <i>Fall</i>			<i>Credits</i>	<i>Completed</i>
English Requirement ( <b>choose one</b> )			3	
	Prerequisite: English Placement Test			
ESH 130	Intro to Hazardous Materials Management		3	<i>Fall Only</i>
ESH 240B	Wastewater Treatment I		3	<i>Fall Only</i>
MATH 120	Fundamentals of College Mathematics		3	
	Prerequisite: Math Placement Exam			
<b>Total</b>			<b>12</b>	

Second Semester			<i>Credits</i>	
Communications Requirement ( <b>choose one</b> )			3	
ESH 202	Environmental Laws and Regulations		3	<i>Spring Only</i>
ESH 241B	Wastewater Treatment II		3	<i>Spring Only</i>
	Prerequisite: ESH 240B			
ESH 246B	Water/Wastewater Mathematics I		3	<i>Spring Only</i>
	Prerequisite: ESH 240B or 243B			
Science Requirement ( <b>choose one</b> )			3	
<b>Total</b>			<b>15</b>	

Summer Semester			<i>Credits</i>	
ESH 250	Pump Operation and Maintenance		3	<i>Summer Only</i>
ESH 251	Current Issues		3	<i>Summer Only</i>
<b>Total</b>			<b>6</b>	

Third Semester			<i>Credits</i>	
ESH 242B	Wastewater Treatment III		3	<i>Fall Only</i>
	Prerequisite: ESH 241B			
ESH 247B	Water/Wastewater Mathematics II		3	<i>Fall Only</i>
	Prerequisite: ESH 246B			
ESH 248B	Water Quality Analysis and Laboratory		4	<i>Fall Only</i>
	Prerequisite: ESH 241B and 246B			
Science Requirement ( <b>choose one</b> )			3	
<b>Total</b>			<b>13</b>	

Fourth Semester			<i>Credits</i>	
ESH Elective ( <b>choose 4 credits</b> )			4	
Fine Arts/Humanities/Soc Sc Requirement ( <b>choose one</b> )			3	
Human Relations Requirement ( <b>choose one</b> )			3	
PSC 101	Introduction to American Politics		4	
<b>Total</b>			<b>14</b>	