## **ENGINEERING TECHNOLOGY:**

## **Civil Engineering Technology Specialization**

Associate of Applied Science

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*Purpose:* This curriculum is designed to prepare students for either employment in civil engineering or the construction industry as a technician or to provide a broad foundation for those individuals who wish to continue their education. Specialization is achieved through the selection of courses for the technical elective requirement. Graduates may seek employment as civil, structural, land planning CAD operators and civil or construction engineering technicians.

**CIV         171 Surveying I         3           DRF         201 Computer Aided Drafting and Design I         4           EGR         115 Engineering Graphics or DRF 165 Architectural Blue-Print Reading         2-3           CSC         110 Introduction to Computing         3           ENG         111 College Composition I         3           **PED         116 Lifetime Fitness & Wellness         1           SDV         Elective         1           **Total         17-18           **PED         116 Lifetime Fitness & Wellness         1           **SDV         Elective         1           **Total         17-18           **PED         116 Lifetime Fitness & Wellness         1           **SDV         Elective         1           **CIV         225 Soil Mechanics         2           **CIV         225 Soil Mechanics         2           **CIV         226 Soil Mechanics         2           **CIV         225 Soil Mechanics         2           **CIV         226 Soil Mechanics         2           **CIV         225 Soil Mechanics         2           **ICIV         226 Computer Aided Drafting & Design II         4           **MTH         166 Precal	Two Years 1st Semester		Credits	
EGR         115 Engineering Graphics or DRF 165 Architectural Blue-Print Reading         2-3           CSC         110 Introduction to Computing         3           ENG         111 College Composition I         3           2PED         116 Lifetime Fitness & Wellness         1           SDV         Elective         1           Total         17-18           2nd Semester           **CIV         172 Surveying II         3           **CIV         225 Soil Mechanics         2           **CIV         226 Soil Mechanics Laboratory         1           DRF         202 Computer Aided Drafting & Design II         4           **MTH         166 Precalculus with Trigonometry         5           **ARC         122 Architectural Drafting II or         18           **BARC         122 Architectural Drafting II or         3           **Design III (Land Development Desktop)         3           **ARC         133 Construction Methodology & Procedures I         3           **EGR         130 Statics & Streng			3	
DRF 165 Architectural Blue-Print Reading   2-3		201 Computer Aided Drafting and Design I	4	
CSC         110 Introduction to Computing         3           ENG         111 College Composition I         3           2PED         116 Lifetime Fitness & Wellness         1           SDV         Elective         1           Total         17-18           2nd Semester         1           **CIV         172 Surveying II         3           **CIV         225 Soil Mechanics         2           **CIV         226 Soil Mechanics Laboratory         1           DRF         202 Computer Aided Drafting & Design II         4           **MTH         166 Precalculus with Trigonometry         5           **4—         Social Science Elective         3           **ARC         122 Architectural Drafting II or         18           **DRF         203 Computer Aided Drafting &         2           **DRF         203 Computer Aided Drafting &         3           **DRF         260 Computer Aided Drafting &         3           **DRF         260 Computer Aided Drafting &         5	EGR		2-3	
2PED       116 Lifetime Fitness & Wellness       1         SDV       Elective       1         Total       177-18         2nd Semester       1         1CIV       172 Surveying II       3         1CIV       225 Soil Mechanics       2         1CIV       226 Soil Mechanics Laboratory       1         DRF       202 Computer Aided Drafting & Design II       4         3MTH       166 Precalculus with Trigonometry       5         4 Social Science Elective       3         Total       18         3rd Semester         ARC       122 Architectural Drafting II or         Design III (Land Development Desktop)       3         ARC       133 Construction Methodology & Procedures I       3         DRF       260 Computer Applications for Surveyors and       3         Technicians (Land Development Desktop)       3         EGR       130 Statics & Strength of Materials or       5         *Technical Elective       5         *PED/RPK       Elective       1         *Total       15         4th Semester         ARC       225 Site Planning & Technology       3         *CIV       210 Structural Sy	CSC	110 Introduction to Computing	3	
SDV   Elective   Total   17-18				
2nd Semester         CIV       172 Surveying II       3         CIV       225 Soil Mechanics       2         CIV       226 Soil Mechanics Laboratory       1         DRF       202 Computer Aided Drafting & Design II       4         3MTH       166 Precalculus with Trigonometry       5         4 Social Science Elective       3         Total       18         3rd Semester         ARC       122 Architectural Drafting II or         DRF 203 Computer Aided Drafting &       2         Design III (Land Development Desktop)       3         ARC       133 Construction Methodology & Procedures I       3         DRF       260 Computer Applications for Surveyors and Technicians (Land Development Desktop)       3         EGR       130 Statics & Strength of Materials or       5         *PED/RPK Elective       5         *PED/RPK Elective       1         **Total       15         4th Semester         ARC       225 Site Planning & Technology       3         **CIV       210 Structural Systems or       5         **CIV       225 Concrete Lab       1         **CIV       229 Concrete Lab       1				
CIV         172 Surveying II         3           ¹CIV         225 Soil Mechanics         2           ¹CIV         226 Soil Mechanics Laboratory         1           DRF         202 Computer Aided Drafting & Design II         4           ³MTH         166 Precalculus with Trigonometry         5           4 Social Science Elective         3           Social Science Elective         3           Total         18           3rd Semester           ARC         122 Architectural Drafting II or           Design III (Land Development Desktop)         3           ARC         133 Construction Methodology & Procedures I         3           DRF         260 Computer Applications for Surveyors and         3           Technicians (Land Development Desktop)         3           EGR         130 Statics & Strength of Materials or         5           ²PED/RPK Elective         1           Total         15           4th Semester           ARC         225 Site Planning & Technology         3           ¹CIV         210 Structural Systems or         5           ¹CIV         228 Concrete Technology         2           ¹CIV         229 Concrete Lab		Total	17 <del>-</del> 18	
¹CIV         225 Soil Mechanics         2           ¹CIV         226 Soil Mechanics Laboratory         1           DRF         202 Computer Aided Drafting & Design II         4           ³MTH         166 Precalculus with Trigonometry         5           4 Social Science Elective         3           Total         18           3rd Semester           ARC         122 Architectural Drafting II or           DRF 203 Computer Aided Drafting &         2           Design III (Land Development Desktop)         3           ARC         133 Construction Methodology & Procedures I         3           DRF         260 Computer Applications for Surveyors and         3           Technicians (Land Development Desktop)         3           EGR         130 Statics & Strength of Materials or         5           ²PED/RPK Elective         5           Total         15           4th Semester           ARC         225 Site Planning & Technology         3           ¹CIV         210 Structural Systems or         5           ¹CIV         228 Concrete Technology         2           ¹CIV         229 Concrete Lab         1           ¹HIS         101 History of West				
¹CIV       226 Soil Mechanics Laboratory       1         DRF       202 Computer Aided Drafting & Design II       4         ³MTH       166 Precalculus with Trigonometry       5         4 Social Science Elective       3         Total       18         3rd Semester         ARC       122 Architectural Drafting II or         DRF 203 Computer Aided Drafting &       2         Design III (Land Development Desktop)       3         ARC       133 Construction Methodology & Procedures I       3         DRF       260 Computer Applications for Surveyors and Technicians (Land Development Desktop)       3         EGR       130 Statics & Strength of Materials or       5         ²PED/RPK       Elective       5         ²PED/RPK       Elective       1         Total       15         4th Semester         ARC       225 Site Planning & Technology       3         ¹CIV       210 Structural Systems or       5         ¹CIV       228 Concrete Technology       5         ¹CIV       229 Concrete Lab       1         ³HIS       101 History of Western Civilization I       3	¹CIV			
DRF         202 Computer Aided Drafting & Design II         4           ³MTH         166 Precalculus with Trigonometry         5           4         Social Science Elective         3           Total         18           3rd Semester           ARC         122 Architectural Drafting II or           DRF 203 Computer Aided Drafting &         Design III (Land Development Desktop)         3           ARC         133 Construction Methodology & Procedures I         3           DRF         260 Computer Applications for Surveyors and         3           Technicians (Land Development Desktop)         3           EGR         130 Statics & Strength of Materials or         5           *PED/RPK Elective         5           *PED/RPK Elective         1           **Total         15           **Total         15           **ARC         225 Site Planning & Technology         3           **CIV         210 Structural Systems or         5           **CIV         228 Concrete Technology         2           **CIV         228 Concrete Technology         2           **CIV         229 Concrete Lab         1           **HIS         101 History of Western Civilization I         3				
3rd Semester  ARC 122 Architectural Drafting II or    DRF 203 Computer Aided Drafting &    Design III (Land Development Desktop) 3  ARC 133 Construction Methodology & Procedures I 3  DRF 260 Computer Applications for Surveyors and    Technicians (Land Development Desktop) 3  EGR 130 Statics & Strength of Materials or  5Technical Elective 5  2PED/RPK Elective 1    Total 15  4th Semester  ARC 225 Site Planning & Technology 3  CIV 210 Structural Systems or  5Technical Elective 5  1CIV 228 Concrete Technology 2  1CIV 229 Concrete Lab 1  6HIS 101 History of Western Civilization I	DRF	202 Computer Aided Drafting & Design II	4	
3rd Semester  ARC 122 Architectural Drafting II or    DRF 203 Computer Aided Drafting &    Design III (Land Development Desktop) 3  ARC 133 Construction Methodology & Procedures I 3  DRF 260 Computer Applications for Surveyors and    Technicians (Land Development Desktop) 3  EGR 130 Statics & Strength of Materials or  5Technical Elective 5  2PED/RPK Elective 1    Total 15  4th Semester  ARC 225 Site Planning & Technology 3  CIV 210 Structural Systems or  5Technical Elective 5  1CIV 228 Concrete Technology 2  1CIV 229 Concrete Lab 1  6HIS 101 History of Western Civilization I	MTH		5 3	
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DRF 203 Computer Aided Drafting & Design III (Land Development Desktop)  ARC 133 Construction Methodology & Procedures I 3 DRF 260 Computer Applications for Surveyors and Technicians (Land Development Desktop)  3 EGR 130 Statics & Strength of Materials or Technical Elective 5 PED/RPK Elective 1 Total 15  4th Semester  ARC 225 Site Planning & Technology 1°CIV 210 Structural Systems or Technical Elective 5 1°CIV 228 Concrete Technology 1°CIV 229 Concrete Lab 10 6°HIS 101 History of Western Civilization I	3rd Semester			
Design III (Land Development Desktop)  ARC 133 Construction Methodology & Procedures I  DRF 260 Computer Applications for Surveyors and Technicians (Land Development Desktop)  EGR 130 Statics & Strength of Materials or  Technical Elective  PED/RPK Elective 1 Total  4th Semester  ARC 225 Site Planning & Technology 1CIV 210 Structural Systems or  Technical Elective 5  CIV 228 Concrete Technology 22 Concrete Lab 6HIS 101 History of Western Civilization I	ARC			
ARC 133 Construction Methodology & Procedures I DRF 260 Computer Applications for Surveyors and Technicians (Land Development Desktop)  EGR 130 Statics & Strength of Materials or  Technical Elective 5  PED/RPK Elective 1 Total 15  4th Semester  ARC 225 Site Planning & Technology 1CIV 210 Structural Systems or  Technical Elective 5  CIV 228 Concrete Technology 21 CIV 229 Concrete Lab 6HIS 101 History of Western Civilization I			3	
Technicians (Land Development Desktop)   3	_	133 Construction Methodology & Procedures I		
### EGR	DRF		3	
2PED/RPK Elective Total         1           4th Semester           ARC         225 Site Planning & Technology         3           ¹CIV         210 Structural Systems or         5           ¹CIV         228 Concrete Technology         2           ¹CIV         229 Concrete Lab         1           ⁶HIS         101 History of Western Civilization I         3	EGR	130 Statics & Strength of Materials or	Ü	
Total         15           4th Semester           ARC         225 Site Planning & Technology         3           ¹CIV         210 Structural Systems or         5           ¹CIV         228 Concrete Technology         2           ¹CIV         229 Concrete Lab         1           ⁶HIS         101 History of Western Civilization I         3				
ARC       225 Site Planning & Technology       3         ¹CIV       210 Structural Systems or       5         ¹CIV       228 Concrete Technology       2         ¹CIV       229 Concrete Lab       1         ⁶HIS       101 History of Western Civilization I       3	PED/RPK			
ARC       225 Site Planning & Technology       3         ¹CIV       210 Structural Systems or       5         ¹CIV       228 Concrete Technology       2         ¹CIV       229 Concrete Lab       1         ⁶HIS       101 History of Western Civilization I       3	Ath Samastar			
CIV       210 Structural Systems or         5Technical Elective       5         1CIV       228 Concrete Technology       2         1CIV       229 Concrete Lab       1         6HIS       101 History of Western Civilization I       3			3	
¹CIV228 Concrete Technology2¹CIV229 Concrete Lab1⁶HIS101 History of Western Civilization I3	<sup>1</sup> CIV	210 Structural Systems or	_	
<sup>1</sup> CIV 229 Concrete Lab 1 <sup>6</sup> HIS 101 History of Western Civilization I 3	<sup>1</sup> CIV			
<sup>6</sup> HIS 101 History of Western Civilization I 3 <sup>7</sup> SPD Elective 3  Total	<sup>1</sup> CIV		1	
SPD Elective 3			3	
I Ulai	SPD	Total	<u>3</u> 17	

Total credits for the A.A.S. Degree in Engineering Technology with a Specialization in Civil Engineering Technology = 67-68.

<sup>&</sup>lt;sup>1</sup> CIV classes are offered only on the Alexandria Campus.

<sup>&</sup>lt;sup>2</sup> The PED requirement may be met by one of the following options: PED 116, 2 cr.; PED 116, 1 cr. Plus a PED activities course, 1 cr.; or PED 116, 1 cr. Plus RPK 205, 216 or 225. PED 116 is offered as both a 1-credit and a 2-credit course.

<sup>&</sup>lt;sup>3</sup> MTH 163-164, Precalculus I-II, may be substituted for MTH 166.

## ENGINEERING TECHNOLOGY AAS: Civil Engineering Technology Specialization

<sup>&</sup>lt;sup>4</sup> The social science elective may be selected from the social/behavioral sciences courses listed under General Education Electives. Students planning to transfer should consider taking HIS 101-102 or HIS 111-112.

 $<sup>^{5}</sup>$  Technical elective must be approved by faculty advisor. Acceptable courses include ARC 200, ART 121, BLD 231, DRF 195/295, DRF 233, or HRT 246.

<sup>&</sup>lt;sup>6</sup> Or select HIS 102, 111-112, 255, or 256 with approval of faculty advisor.

<sup>&</sup>lt;sup>7</sup> The SPD elective may be selected from the following: SPD 100, 110, 115, 126, 227 or 229.