

ABET to ET-Telecommunications SLO Map

ABET SO	ET Telecommunications SLO	Measurable Outcomes from annual self-assessment report
<p>(1) an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline;</p>	<p>1.) Construct, test, and verify the operation of voice and data cables, various analog, digital and microprocessor/microcontroller circuits, demonstrate a working knowledge of filter circuits, fiber optics, electronics/telecommunications laboratory test equipment. <i>NOTE: Troubleshooting and repair is inherent to this outcome. All analysis of AC circuits is accomplished using complex numbers and the necessary underlying algebra and trigonometry.</i></p> <p>2.) Perform IP network installation, maintenance, configuration, analysis, and management, while utilizing devices such as Routers and PCs. <i>NOTE: Troubleshooting and repair is inherent to this outcome even to network installation along with being necessary</i></p>	<p>SLO 1. Measurable Outcomes:</p> <p>A.1 Construct, test, and verify the operation of voice and data cables.</p> <p>A.2. Construct, test, and verify the operation of analog circuits. <i>NOTE: Troubleshooting and repair is inherent to how these outcomes are accomplished. Since, circuits cannot be built and work in a LAB setting without problems that must be troubleshot and repaired. All analysis of AC circuits is accomplished using complex numbers and the necessary underlying algebra and trigonometry.</i></p> <p>A.3. Construct, test, and verify the operation of digital and microprocessor/micro-controller circuits. <i>NOTE: Troubleshooting and repair is inherent to how these outcomes are accomplished. Since digital circuits cannot be built and work in a LAB setting without problems that must be troubleshot and repaired. Especially digital circuits with programed processors cannot be built and work in a LAB setting without hardware and software problems that must be troubleshot (debugged for software) and repaired.</i></p> <p>A.4. Demonstrate a working knowledge of filter circuits. <i>NOTE: Troubleshooting and repair is inherent to how these outcomes are accomplished. Since, circuits cannot be built and work in a LAB setting without problems that must be troubleshot and repaired. Since analysis, of either passive or active filter circuits involves analysis of AC circuits which uses complex numbers and the necessary underlying algebra and trigonometry.</i></p> <p>A.5. Demonstrate a working knowledge of fiber optics.</p> <p>SLO 2. Measurable Outcome B. Perform IP network installation, maintenance, configuration, analysis, and management, while utilizing devices such as Routers and PCs. <i>NOTE: Troubleshooting and repair is inherent to this outcome, it even applies to network installation p</i></p>

	<p><i>for maintenance which can often include solving operation problems.</i></p> <p>3.) Explain the signaling and system structure of the various types of telephones, such as the mobile, IP based, and traditional. Distinguish between the various modulation and multiplexing techniques commonly employed in the telecommunication transmission systems.</p> <p>4.) Distinguish between the various modulation and multiplexing techniques commonly employed in the telecommunication transmission systems.</p>	<p><i>being necessary for maintenance which can often include solving operation problems.</i></p> <p>SLO 3. Measurable Outcomes: C.1. Explain the signaling and system structure of the various types of telephones, such as the mobile, IP based, and traditional. C.2. Distinguish between the various modulation and multiplexing techniques commonly employed in telecommunications transmission systems. <i>NOTE: Troubleshooting and repair is inherent to how these outcomes are accomplished. Since, circuits cannot be built and work in a LAB setting without problems that must be troubleshot and repaired.</i></p> <p>SLO 4. Measurable Outcomes: D. Distinguish between the various modulation and multiplexing techniques commonly employed in telecommunications transmission systems. <i>NOTE: Involves the construction, analysis, and testing of AM, FM and Delta modulation circuits during ET293B Labs. Troubleshooting and repair is inherent to how these outcomes are accomplished, since circuits cannot be built and work in a LAB setting without problems that must be troubleshot and repaired.</i></p>
<p>(2) an ability to design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline;</p>	<p>1.) Construct, test, and verify the operation of voice and data cables, various analog, digital and microprocessor/microcontroller circuits, demonstrate a working knowledge of filter circuits, fiber optics, electronics/ telecommunications laboratory test equipment.</p> <p>2.) Perform IP network installation, maintenance, configuration, analysis, and management, while utilizing devices such as Routers and PCs.</p> <p>3.) Explain the signaling and system structure of the various types of telephones, such as the mobile, IP based, and traditional. Distinguish between the various modulation and</p>	<p>SLO 1. Measurable Outcomes: A.1 Construct, test, and verify the operation of voice and data cables. A.2. Construct, test, and verify the operation of analog circuits. A.3. Construct, test, and verify the operation of digital and microprocessor/micro-controller circuits. A.4. Demonstrate a working knowledge of filter circuits. A.5. Demonstrate a working knowledge of fiber optics.</p> <p>SLO 2. Measurable Outcome B. Perform IP network installation, maintenance, configuration, analysis, and management, while utilizing devices such as Routers and PCs.</p> <p>SLO 3. Measurable Outcomes: C.1. Explain the signaling and system structure of the various types of telephones, such as the mobile, IP based, and traditional.</p>

	<p>multiplexing techniques commonly employed in telecommunication transmission systems.</p> <p>4.) Distinguish between the various modulation and multiplexing techniques commonly employed in the telecommunication transmission systems.</p>	<p>C.2. Distinguish between the various modulation and multiplexing techniques commonly employed in telecommunications transmission systems.</p> <p>SLO 4. Measurable Outcomes: D. Distinguish between the various modulation and multiplexing techniques commonly employed in telecommunications transmission systems.</p>
<p>(3) an ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.</p>	<p>General Education courses for English and Communications.</p> <p>6. Demonstrate positive work ethics and interpersonal skills in a group environment.</p>	<p>- English Composition Courses</p> <p>- Communication courses on Oral or Business Com.</p> <p>SLO 6. Measurable Outcome 2.2. Demonstrate an ability to deliver written and oral reports on projects.</p>
<p>(4) an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results</p>	<p>1.) Construct, test, and verify the operation of voice and data cables, various analog, digital and microprocessor/microcontroller circuits, demonstrate a working knowledge of filter circuits, fiber optics, electronics/telecommunications laboratory test equipment. <i>NOTE: Troubleshooting and repair is inherent to this outcome. All analysis of AC circuits is accomplished using complex numbers and the necessary underlying algebra and trigonometry.</i></p>	<p>SLO 1. Measurable Outcomes: A.1 Construct, test, and verify the operation of voice and data cables. A.2. Construct, test, and verify the operation of analog circuits. <i>NOTE: Troubleshooting and repair is inherent to how these outcomes are accomplished. Since, circuits cannot be built and work in a LAB setting without problems that must be troubleshot and repaired. All analysis of AC circuits is accomplished using complex numbers and the necessary underlying algebra and trigonometry.</i> A.3. Construct, test, and verify the operation of digital and microprocessor/micro-controller circuits. <i>NOTE: Troubleshooting and repair is inherent to how these outcomes are accomplished. Since digital circuits cannot be built and work in a LAB setting without problems that must be troubleshot and repaired. Especially digital circuits with programmed processors cannot be built and work in a LAB setting without hardware and software problems that must be troubleshot (debugged for software) and repaired.</i></p>

	<p>2.) Perform IP network installation, maintenance, configuration, analysis, and management, while utilizing devices such as Routers and PCs. <i>NOTE: Troubleshooting and repair is inherent to this outcome even to network installation along with being necessary for maintenance which can often include solving operation problems.</i></p> <p>3.) Explain the signaling and system structure of the various types of telephones, such as the mobile, IP based, and traditional. Distinguish between the various modulation and multiplexing techniques commonly employed in the telecommunication transmission systems.</p> <p>4.) Distinguish between the various modulation and multiplexing techniques commonly employed in the telecommunication transmission systems.</p>	<p>A.4. Demonstrate a working knowledge of filter circuits. <i>NOTE: Troubleshooting and repair is inherent to how these outcomes are accomplished. Since, circuits cannot be built and work in a LAB setting without problems that must be troubleshot and repaired. Since analysis, of either passive or active filter circuits involves analysis of AC circuits which uses complex numbers and the necessary underlying algebra and trigonometry.</i></p> <p>A.5. Demonstrate a working knowledge of fiber optics.</p> <p>SLO 2. Measurable Outcome B. Perform IP network installation, maintenance, configuration, analysis, and management, while utilizing devices such as Routers and PCs. <i>NOTE: Troubleshooting and repair is inherent to this outcome, it even applies to network installation along with being necessary for maintenance which can often include solving operation problems.</i></p> <p>SLO 3. Measurable Outcomes: C.1. Explain the signaling and system structure of the various types of telephones, such as the mobile, IP based, and traditional. C.2. Distinguish between the various modulation and multiplexing techniques commonly employed in telecommunications transmission systems. <i>NOTE: Troubleshooting and repair is inherent to how these outcomes are accomplished. Since, circuits cannot be built and work in a LAB setting without problems that must be troubleshot and repaired.</i></p> <p>SLO 4. Measurable Outcomes: D. Distinguish between the various modulation and multiplexing techniques commonly employed in telecommunications transmission systems. <i>NOTE: Involves the construction, analysis, and testing of AM, FM and Delta modulation circuits during ET293B Labs. Troubleshooting and repair is inherent to how these outcomes are accomplished, since circuits cannot be built and work in a LAB setting without problems that must be troubleshot and repaired.</i></p>
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<p>(5) an ability to function effectively as a member of a technical team.</p>	<p>6.) Support positive work ethics and interpersonal skills in a group environment and deliver written and oral reports on projects.</p>	<p>F.1. Demonstrate positive work ethics and interpersonal skills in a group environment. <i>Note: Based upon teamwork on ET 228B Labs (teams of 2-3) and final course project in ET228B and Capstone Project for ET294B (teams of 2-4).</i></p> <p>All Measurable Outcomes from annual self-assessment report that depend upon results from Labs from the following courses that require Lab to be accomplished by Teams of two or three members for courses: CIT112, ET132B, ET228B, and ET293B.</p>
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The Latest Annual assessment report is available upon request.