**The University of Vermont**

**Biomedical Engineering Program**

**Course Assessment Report**

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| --- | --- | --- | --- |
| **Course Number** |  | **Semester/Year** |  |
| **Course Name** |  |
| **Credits** |  | **Number of Students** |  |
| **Instructor** |  | **Signature**  |  |

1. **SUMMARY OF PRIOR REMEDIATION ACTIONS**

Listing of prior recommended remedial actions and their results.

*Your text here.*

1. **ASSESSMENT RESULTS FOR CURRENT YEAR**

Please provide the learning objectives for the course in the table below. For each objective, provide a mapping to the ABET outcome (i.e., 1 to 7, B1-B4) which this learning objective supports (second column). ABET outcomes can be found at the document’s end. Finally, in the last column, note how you are assessing student performance (use codes at bottom of table) and what the results (mean, standard deviation) were.

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| **#** | **Course Learning****Objective** | **Associated ABET****Outcome****(if applicable)** | **Numerical Assessment****(mean, σ)** |
| *Example* | *Students will be able to quantify key characteristics of baseband signals including power and bandwidth.* | *1* | *Q1 (81, 11)**E1.1 (76, 13)**F.1 (78, 12)**L1 (88, 10)* |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |
| 6 |  |  |  |

Note: EX.Y = Exam, Problem; FX.Y = Final Exam, Problem; LB = Logbook, L = Lab, LR = Lab report, HW = Homework, Q = Quiz, S = Simulation, PP = Project, Presentation, P = Problem, PE = Peer Evaluations, IO = Instructor Observation, TH = Take Home, O = Other.

**3. COURSE ASSESSMENT RESULTS**

Discuss assessment results. What criteria are used to determine satisfactory outcomes? Did students satisfactorily meet the objectives of the course? If not, discuss areas for improvement and action plan in Step 5 below.

*Your text here.*

**4. RECOMMENDED CHANGES TO COURSE LEARNING OBJECTIVES**

Provide recommended changes to course learning objectives (if any).

*Your text here.*

**5. NEW RECOMMENDED ACTIONS**

Recommended changes to the course and expected impact.

*Your text here.*

**6. COURSE SYLLABUS**

See attached.

*Attach syllabus.*

**7. ABET DIRECT MEASUREMENTS TABLE**

See attached.

*As appropriate, please record data from Table above to the attached sheets. Assess whether direct measure is pass.*

**Direct Measure of ABET Outcomes**

**Course:**

**Instructor:**

**Term:**

**Contributions:** 0 – none or minimal, 1 – some or not measured, 2 – significant and measured

**Direct Measures:**TD = Team Deliverable #, ME = Mid-term Exam question #, FE = Final Exam, LB = Logbook, ITN = In The News Presentation, E = Exam, L = Lab, HW = Homework, S = Simulation, FP = Final Presentation, P = Problem, BWD = Bi-Weekly Deliverable, PE = Peer Evaluations, IO = Instructor Observation, TH = Take Home

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| **Outcome 1** | *An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.* |
| **a** | engineering |
| **b** | science |
| **c** | mathematics |

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| **Outcome** | **Contribution (0-2)** | **Direct Measure** | **Results (**$\overbar{x}, σ$**)** | $$\overbar{x}-σ>60?$$ |
| **1a** |  |  |  |  |
| **1b** |  |  |  |  |
| **1c** |  |  |  |  |

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| **Outcome 2** | *An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.* |
| **a** | public health, safety and welfare |
| **b** | global, cultural and social |
| **c** | environmental |
| **d** | economic |

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| **Outcome** | **Contribution (0-2)** | **Direct Measure** | **Results (**$\overbar{x}, σ$**)** | $$\overbar{x}-σ>60?$$ |
| **2a** |  |  |  |  |
| **2b** |  |  |  |  |
| **2c** |  |  |  |  |
| **2d** |  |  |  |  |

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| **Outcome 3** | *An ability to communicate effectively with a range of audiences.* |
| **a** | technical |
| **b** | non-technical |

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| **Outcome** | **Contribution (0-2)** | **Direct Measure** | **Results (**$\overbar{x}, σ$**)** | $$\overbar{x}-σ>60?$$ |
| **3a** |  |  |  |  |
| **3b** |  |  |  |  |

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| **Outcome 4** | *An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.* |
| **a** | global and societal |
| **b** | environmental |
| **c** | economic |

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| **Outcome** | **Contribution (0-2)** | **Direct Measure** | **Results (**$\overbar{x}, σ$**)** | $$\overbar{x}-σ>60?$$ |
| **4a** |  |  |  |  |
| **4b** |  |  |  |  |
| **4c** |  |  |  |  |

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| **Outcome 5** | *An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.* |
| **a** | collaborative and inclusive  |
| **b** | establish goals |
| **c** | plan tasks |
| **d** | meet objective |

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| **Outcome** | **Contribution (0-2)** | **Direct Measure** | **Results (**$\overbar{x}, σ$**)** | $$\overbar{x}-σ>60?$$ |
| **5a** |  |  |  |  |
| **5b** |  |  |  |  |
| **5c** |  |  |  |  |
| **5d** |  |  |  |  |

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| **Outcome 6** | *An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.* |
| **a** | develop and conduct |
| **b** | analyze and interpret |
| **c** | draw conclusions |

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| **Outcome** | **Contribution (0-2)** | **Direct Measure** | **Results (**$\overbar{x}, σ$**)** | $$\overbar{x}-σ>60?$$ |
| **6a** |  |  |  |  |
| **6b** |  |  |  |  |
| **6c** |  |  |  |  |

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| **Outcome 7** | An ability to acquire and apply new knowledge as needed, using appropriate learning strategies. |
| **a** | Acquire new knowledge using appropriate strategies |
| **b** | Apply new knowledge |

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| **Outcome** | **Contribution (0-2)** | **Direct Measure** | **Results (**$\overbar{x}, σ$**)** | $$\overbar{x}-σ>60?$$ |
| **7a** |  |  |  |  |
| **7b** |  |  |  |  |

**Direct Measure of Biomedical Program Outcomes**

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| **Outcome B1** | *Applying principles of engineering, biology, human physiology, chemistry, calculus-based physics, mathematics (through differential equations) and statistics* |

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| **Outcome** | **Contribution (0-2)** | **Direct Measure** | **Results (**$\overbar{x}, σ$**)** | $$\overbar{x}-σ>60?$$ |
| **B1** |  |  |  |  |

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| **Outcome B2** | *Solving bio/biomedical engineering problems, including those associated with the interaction between living and non-living systems;* |

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| **Outcome** | **Contribution (0-2)** | **Direct Measure** | **Results (**$\overbar{x}, σ$**)** | $$\overbar{x}-σ>60?$$ |
| **B2** |  |  |  |  |

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| **Outcome B3** | *Analyzing, modeling, designing, and realizing bio/biomedical engineering devices, systems, components, or processes* |

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| **Outcome** | **Contribution (0-2)** | **Direct Measure** | **Results (**$\overbar{x}, σ$**)** | $$\overbar{x}-σ>60?$$ |
| **B3** |  |  |  |  |

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| **Outcome B4** | *Making measurements on and interpreting data from living systems.* |

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| **Outcome** | **Contribution (0-2)** | **Direct Measure** | **Results (**$\overbar{x}, σ$**)** | $$\overbar{x}-σ>60?$$ |
| **B4** |  |  |  |  |