**MSE PhD Qualifier Exams Learner Outcome Assessment Table**

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| **Outcome** | **Assessment Goal** | **AY 2017-18** | **AY-2018-19** | **AY-2019-20** |
| **(1) Clearly demonstrate a fundamental knowledge of a broad range of principles used in materials science and engineering** | Goal is to achieve a minimum ***average*** score of 2.0 on each qualifier exam  *and*  At least 70% of students achieve a 2.0 or higher on each qualifier exam | Part I: Crystallography, Crystal Chemistry and Diffraction. 15 of 19 students (78.95%) met or exceeded expectations (average score=1.95).  Part II: Mechanical Behavior of Materials. 15 of 17 students (88.23%) met or exceeded expectations (average score=2.06).  Part III: Thermodynamics of Materials. 12 of 16 students (87.50%) met or exceeded expectations (average score=2.00).  Part IV: Electronic, Optical and Magnetic Properties of Materials. 4 of 6 students (83.33%) met or exceeded expectations (average score=2.00). | Part I: Crystallography, Crystal Chemistry and Diffraction. 16 of 19 students (84.21%) met or exceeded expectations (average score=1.95).  Part II: Mechanical Behavior of Materials. 11 of 13 students (84.62%) met or exceeded expectations (average score=2.00).  Part III: Thermodynamics of Materials. 13 of 15 students (86.67%) met or exceeded expectations (average score=2.07).  Part IV: Electronic, Optical and Magnetic Properties of Materials. 8 of 10 students (80.00%) met or exceeded expectations (average score=1.90). | Part I: Crystallography, Crystal Chemistry and Diffraction. 10 of 10 students (100%) met or exceeded expectations (average score=2.20).  Part II: Mechanical Behavior of Materials. 5 of 5 students (100%) met or exceeded expectations (average score=2.20).  Part III: Thermodynamics of Materials. 7 of 9 students (77.78%) met or exceeded expectations (average score=2.00).  Part IV: Electronic, Optical and Magnetic Properties of Materials. 5 of 6 students (83.33%) met or exceeded expectations (average score=2.00). |

In 2017-18, 2018-19, and 2019-20, the goal requiring at least 70% of students to achieve a 2.0 or higher on each qualifier exam was satisfied.

In 2017-18, the goal of achieving a minimum *average* score of 2.0 on each qualifier exam was not achieved on the Part I exam.

In 2018-19, the goal of achieving a minimum average score of 2.0 on each qualifier exam was not achieved on both Part I & IV exams.

In 2019-20, the goal of achieving a minimum average score of 2.0 on each qualifier exam WAS achieved on all parts of the qualifier exam (i.e., Parts I, II, III, and IV)

The MSE Graduate Affairs Committee (consisting of 10 tenured / tenure-track faculty) met in September 2020 to review the results of the SACS assessment for this academic assessment period (2019-20). The committee was highly satisfied with the 2019-20 results and consequently, NO action was recommended by the committee reviewing the assessment of these outcomes.

This committee determined that the methodology employed for this assessment is sufficient and no revision of this learner outcome is necessary at this time.