

**Course Evaluation Measures Menu**

**Course number: NRG 111**

**Course title: Residential/Light Commercial Energy Analysis**

**Campus location(s): Georgetown, Dover, Stanton**

**Effective semester: 202251**

**Core Course Performance Objectives**

1. Engage in professional behavior. (CCC 1, 3, 4, 5)
2. Conduct energy audits in residential and/or light commercial buildings to analyze energy efficiency and building health and safety.(CCC 1, 2, 4, 6; PGC NRG 1, 2, 3, 4, 5, 6, 7 PGC SOL 1,2,3,4,5)
3. Analyze data related to construction materials that make up thermal and vapor barriers (and their proper alignment) in existing residential and light commercial buildings with consideration given to indoor air quality.(CCC 2, 5, 6; PGC NRG 1, 2, 3, 4, 5, 6, 7; PGC SOL 1, 2, 3, 4, 5)
4. Use tools required by the Building Performance Institute (BPI) (blower door, duct-blaster, IR camera, manometer, pressure pans, humidistat, psychrometer, and/or utility meters) for gathering and diagnosing information in the completion of an energy audit and recommend efficiency and health/safety improvements.  (CCC 2, 3, 5, 6; PGC NRG 1, 2, 4, 5; SOL 1, 2, 3, 4, 5)
5. Identify combustion appliance zones, use combustion evaluation equipment (combustion test kits, CO monitors, and gas leak detectors), and evaluate the safe and efficient operation of fossil fueled heating equipment and appliances. (CCC 2, 4, 5, 6; PGC NRG 1, 2, 3, 4; SOL 1, 2, 3, 4, 5)

**Summative Evaluations**

*Please note: All courses must have a* ***minimum******of four*** *summative evaluation measures, and those measures should include a variety evaluation methods (e.g., test, oral presentation, group project).* ***Please list all summative evaluation measures.*** *In addition to these summative measures, a variety of formative exercises/quizzes/other assignments should be used to guide instruction and learning* *but do not need to be included on this template.*

*For each measure, please include a scope of the assignment: for example, if requiring a research paper, include the range of required number of words and numbers and types of sources; for a test, include the types and numbers of questions; for a presentation, include the minimum and maximum time, and so on.*

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| **Evaluation Measures:** Include each agreed upon measure and scope of that measure (see above). | **Which CCPO(s) does this evaluation measure?** |
| **Exams (2-3), Summative:** mixture of true/false, multiple choice, matching, short answer, and calculations; 25 – 40 questions | **1, 2, 3, 5, 6** |
| **Energy Audit (1) Summative:** Perform residential energy audit using equipment, gathering data, and working in teams to determine audit actions. | **1 - 6** |
| **Energy Audit Report and Presentation (1), Summative:** Compile information and organize into an audit report; present results of Energy Audit in professional manner; report varies in length based on software/method used (usually 4 – 10 pages); presentation is 10 – 20 minutes long and done in groups. | **1-5** |
| **Labs (5 - 8), formative:** Mixture of hands-on labs using equipment, calculations, and analysis using web/digital data | **1 - 6** |
| **Quizzes (8 - 12), formative:** mixture of true false, multiple choice, matching, calculations | **1 - 4** |
| **Homework (5 – 8):** Mixture of calculations, presentations, research, application. | **1 - 6** |
| **Current Event or Case Study Presentation (1), formative:** Find case study or other energy-related news item and present findings; no more than 5 minutes | **1, 2** |

**FINAL COURSE GRADE**

(Calculated using the following weighted average)

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| **Evaluation Measure** | **Percentage of final grade** |
| Summative: 2 Exams, Equally Weighted | 30% |
| Summative Projects: Energy Audit, Report, Presentation | 30% |
| Formative (quizzes, labs, homeworks) | 40% |
| TOTAL | 100% |

(Electronic Signature Permitted)

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| **Submitted by (Collegewide Lead):** |  |  |  |
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| **Approved by counterparts** |  |  |  |
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| **Reviewed by Curriculum Committee** | | **Date** | 9/1/20 |