

GM Technical Education Program

U-M ISD Energy Systems Engineering

*Please submit your plan of study for review to your*

***Graduate Coordinator*** *or energysystemsinfo@umich.edu.*

**PLAN OF STUDY**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Student Name: |       |  | Today’s Date: |       |
| UM Student ID #: |       | GM Location: |       **(City, State, Country)** |
| **Approved Date:** |       | **U-M Approval:** | Email:       |
| **COURSE NUMBER/COURSE TITLE** | **CREDITS** | **TERM/YEAR** | **INSTITUTION** | **TERM\*** |
| **SYSTEMS INTEGRATION** (**3** Credits)Required Courses: (Must select ESENG 501) |
| [ESENG 501](http://isd.engin.umich.edu/course-listings/eseng-501-seminars-in-energy-systems-technology-and-policy/)- Seminars on Energy, Tech & Policy | 3 | / | UM | F |
| **ENGINEERING CORE** (**9** Credits)(Must select AUTO 533, ISD 520, and select either ESENG 505 or ME 7383) |
| [AUTO 533](http://isd.engin.umich.edu/course-listings/auto-533-advanced-energy-solutions/) – Advanced Energy Solutions | 3 | / | UM | F |
| [ISD 520](http://isd.engin.umich.edu/course-listings/isd-520-introduction-to-systems-engineering/) – Systems Engineering | 3 | / | UM | F, W, SS |
| [ESENG 505](http://isd.engin.umich.edu/course-listings/eseng-505-energy-generation-and-storage-using-modern-materials/) – Energy Generation & Storage Using Modern Materials | 3 | / | UM | F ODD YRS SS EVEN YRS |
| **-OR-** |  |
| MECHENG 7383\* - Elec Energy Con & Storage Sys | 3 | / | OSU | W |
| **ENERGY ANALYSIS** (**6** Credits) (Select two courses from this area) |
| [MECHENG 565](http://isd.engin.umich.edu/course-listings/mecheng-565-battery-systems-and-control/) – Battery Systems & Control | 3 | / | UM | W |
| [MECHENG 555](http://isd.engin.umich.edu/course-listings/mecheng-555-mfg-555-design-optimization/) – Design Optimization | 3 | / | UM | W |
| [ISD 599C](http://isd.engin.umich.edu/course-listings/isd-599c-development-and-verification-of-system-design-requirements/) – Development & Verification of Sys Design Req. | 3 | / | UM | F |
| [CEE 567](http://isd.engin.umich.edu/course-listings/cee-567-eseng-567-energy-infrastructure-systems/) – Energy Infrastructure Systems | 3 | / | UM | W |
| [CEE 564](http://isd.engin.umich.edu/course-listings/cee-564-greenhouse-gas-control/) – Greenhouse Gas Control | 3 | / | UM | W |
| ME 8372\* – Fault Diagnosis in Dynamic Systems  | 3 | / | OSU | F |
| [MECHENG 489](http://isd.engin.umich.edu/course-listings/mecheng-489-sustainable-engineering-and-design/) – Sustainable Engineering in Design | 3 | / | UM | F |
| **-OR-** |  |
| [ESENG 599](http://isd.engin.umich.edu/course-listings/eseng-599-sustainable-energy-systems/) – Sustainable Energy Systems | 3 | / | UM | F |
| **TRANSPORTATION POWER SPECIALTY** (**9** Credits)(Select three courses from this area) |
| [MECHENG 569](http://umisd.wpengine.com/course-listings/mecheng-569-control-of-advanced-powertrain-systems/) – Ctrl of Advanced Powertrain Sys | 3 | / | UM | F ODD YRS |
| LUP 625\* – Electric Drives | 3 | / | Chalmers | W |
| [MECHENG 566](http://isd.engin.umich.edu/course-listings/mecheng-566-auto-566-modeling-analysis-and-control-of-hybrid-electric-vehicles/) – Hybrid Elec Vehicles | 3 | / | UM | W |
| [CHE 696](http://isd.engin.umich.edu/course-listings/che-696-fuel-cells-and-fuel-processors/) – Fuel Cells & Fuel Processors | 3 | / | UM | F EVEN YRSSS ODD YRS |
| [EECS 419](http://isd.engin.umich.edu/course-listings/eecs-419-electric-machinery-and-drives/) – Electric Machinery and Drives | 4 | / | UM | W |
| ECE 5025 – Power Elec: Dev, Circuits & Applications | 3 | / | OSU | F, SS |
| ECE 5553 – Autonomy in Vehicles | 3 | / | OSU | W |
| [ISD 599G](http://isd.engin.umich.edu/course-listings/mecheng-599-isd-599g-cee-501-rob-599-dynamics-and-control-of-connected-vehicles/) – Dynamics & Ctrl of Connected Vehicles | 3 | / | UM | W |
| **Project (3 credits) (Must select ESENG 503 as the 9th or 10th course)** |
| [ESENG 503](http://isd.engin.umich.edu/course-listings/eseng-503-energy-systems-project/) – Energy Systems Project – **GM Directed** | 3 | / | UM | F, W, SS |

**\*Fall – F, Winter – W and Spring Summer - SS**

\* Note that courses listed in the Bulletin may not always be offered during the terms indicated. The IS+D office will maintain up to date lists of course offerings as they become available. Up to two courses at the 400 level can be counted towards the MEng. degree.

\*\* We strongly advise that the last course taken within any Plan of Study be a course from the University of Michigan. We cannot guarantee that grades from other institutions will be forwarded in time for the degree to be awarded in the term you have selected.

**\* IT IS THE STUDENT’S RESPONSIBILITY TO MEET ALL PROGRAM REQUIREMENTS\***