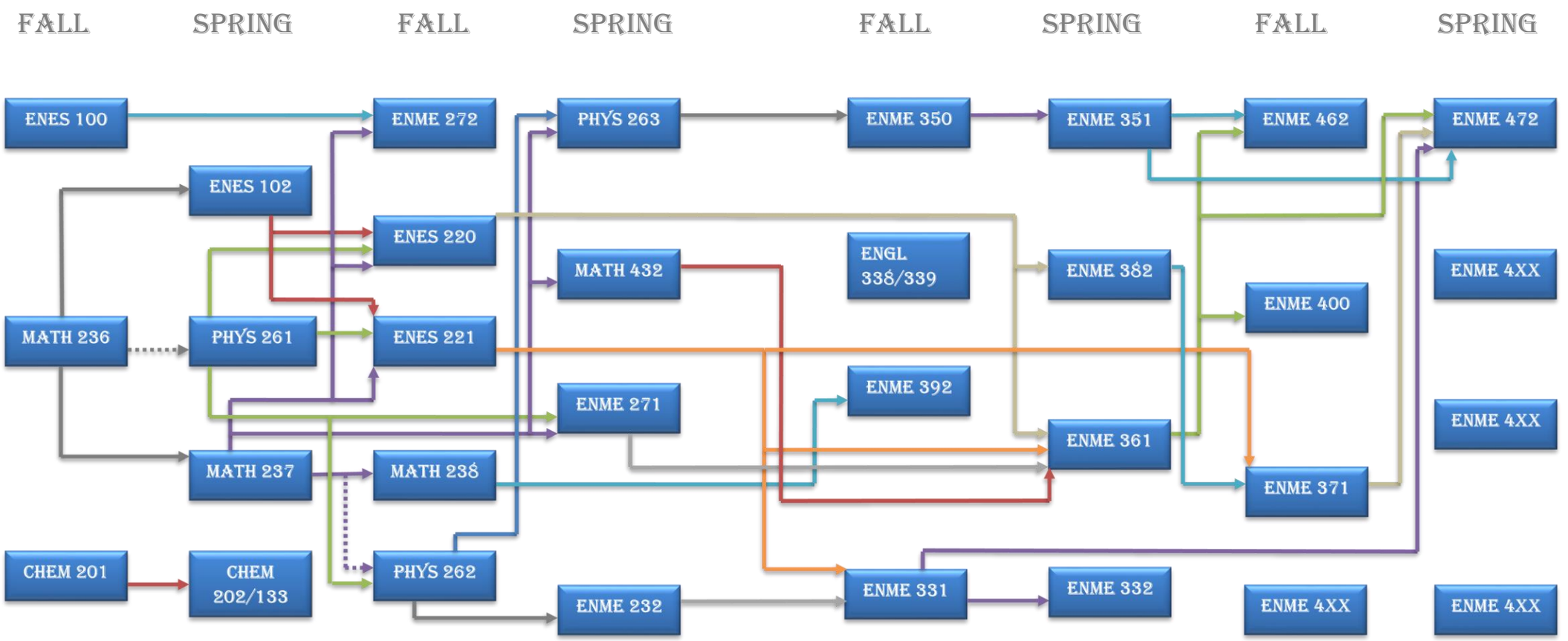
Course Map for Mechanical Engineering Collaborative Program with University of Maryland at College Park



Legend

→	Prerequisite
⇢	Corequisite
ENME 4xx	These may be 400 level courses in MATH, PHYS, CHEM upon UME approval.

Course	Credits	Requirements
ENES 100: Introduction to Engineering Design	3	
MATH236 - Calculus I	4	Prerequisite: Passing score on Mathematics Placement Test or C or better in MATH 120
CHEM201 - General Chemistry I	4	Prerequisite: placement at Math Level II
ENES102 - Statics	3	Prerequisite: MATH 236
PHYS261 - Principles of Physics I: Mechanics, Waves and Oscillations	4	corequisite: MATH 236
MATH237 - Calculus II	4	Prerequisite: C or better in MATH 236
CHEM202 - General Chemistry II	4	Prerequisite: CHEM 201 and MATH 119
CHEM133 - General Chemistry for Engineers	3	Prerequisite: Must complete CHEM 201
ENME272 - Introduction to Computer-Aided Design	2	Prerequisite: ENES 100 and a "C" grade or better in MATH 237
ENES220 - Mechanics of Materials	3	Prerequisite: ENES102, MATH237 and PHYS261 with a "C" grade or better
ENES221 - Dynamics	3	Prerequisite: ENES102, MATH237 and PHYS261 with a "C" grade or better
MATH238 - Calculus III	4	Prerequisite: C or better in MATH 237
PHYS262 - Principles of Physics II: Thermodynamics, Electricity and Magnetism	4	Prerequisite: PHYS261 and corequisite MATH 237
PHYS263 - Principles of Physics III: Light and Modern Physics	4	Prerequisite: PHYS262 and MATH237
MATH432 - Differential Equations	3	Prerequisite: C grade or better in MATH 237
ENME271 - Numerical Methods in Mechanical Engineering	3	Prerequisite: PHYS 261 and MATH 237
ENME232 - Thermodynamics	3	Prerequisite: PHYS261 and PHYS262
ENME350 - Electronics and Instrumentation I	3	Prerequisite: C or better in PHYS262 and MATH 237; co-requisite PHYS263 or ENEE204
ENGL338 - Technical Writing	3	Prerequisite: must complete Freshman Composition (ENGL101 or 111) with C grade or better and at least 42 credits.
ENGL339 - Scientific Writing	3	Prerequisite: Must complete Freshman Composition (ENGL101 or 111) with C grade or better and at least 42 credits.
ENME392 - UMCP-Statistical Methods for Product & Process Develop	3	Prerequisite: MATH 238
ENME331 - Fluid Mechanics	3	Prerequisite: C or better in ENES221, ENME232 or 320
ENME351 - Electronics and Instrumentation II	3	Prerequisite: C grade or better in ENME350 and PHYS263 or ENEE204
ENME382 - Engineering Materials & Manufacturing Processes	3	Prerequisite: A “C” or better in ENES 220
ENME361 - UMCP-Vibration, Controls and Optimization I	3	Prerequisite: ENES220, ENES 221, ENME 271, and MATH 432
ENME332 - Transfer Processes	3	Prerequisite: C grade or better in ENME331
ENME462 - UMCP-Vibration, Controls and Optimization II	3	Prerequisite: ENME 351 and ENME 361
ENME400 - Machine Design	3	Prerequisite: ENME 361

ENME371 - Product Engineering and Manufacturing3	**3**	**Prerequisite: ENES221 and ENME392**
ENME472 - Integrated Product and Process Development	**3**	**Prerequisite: ENME 331, ENME 351, ENME 361, ENME 371, complete or concurrently enrolled in ENME 332, or permission of the department chairperson.**