



Meta Major Map – Physical Sciences and Engineering



Use this academic map to plan up to two semesters of coursework that will help you explore majors that can lead to careers that focus on the practical and theoretical application of math and science. **Use this map in consultation with your Academic Advisor.** This map will assist you in staying on track to complete majors such as: Aerospace Engineering, Biochemistry, Chemical Engineering, Chemistry, Civil Engineering, Computer Science, Electrical Engineering, Engineering Physics, Engineering Technology – Civil, Engineering Technology - Electronics and Computer, Engineering Technology – Information, Engineering Technology – Mechanical, Geography, Geology, Industrial Engineering, Mathematics, Mechanical Engineering, Physics, and Surveying Engineering. For more information about majors and careers, see <http://careerexploration.nmsu.edu/step-2-career-exploration/information-on-majors/>

Term 1

Course	Credits
ENGL 111G or ENGL 111GH	4
MATH 191G	4
CHEM 111G or CHEM 115 or Exploratory Course*	4
Exploratory Course	3-4
Area IV: Social/Behavioral Sciences or Area V: Humanities & Fine Arts, UNIV 150, CHEM 101, or elective	1-4
Total	16-18

Term 2

Course	Credits
ENGL 218G	3
MATH 192G or MATH 192GH	4
CHEM 112G or CHEM 116 or PHYS 215 or Exploratory Course*	3-4
Exploratory Course	3-4
Area IV: Social/Behavioral Sciences, Area V: Humanities & Fine Arts, Second Language, or elective	3-4
Total	16-18

Notes:

Course Placement – ENGL 111G and MATH require placement based on ACT score and HS GPA. If you do not place into these courses, a prerequisite may be required. You can take the Math Placement Exam to attempt to improve your placement in Math and/or Statistics.

***Chemistry** – CHEM 111 or CHEM 115 is required for all Engineering majors except Engineering Technology. Biochemistry and Geology majors can take CHEM 111/112 but CHEM 115/116 is preferred. CHEM 115/116 is required for Chemistry and the BS in Physics. Math and Computer Science do not specifically require CHEM 111/112 but those fulfill Gen Ed. Geography majors should take GEOG 111G instead of Chemistry.

Math – Geography majors should take STAT 251G or A ST 311 instead of MATH 192G.

Area IV – ECON 252G is recommended for all Engineering majors. Math-Actuarial Science requires ECON 251G and ECON 252G. All other majors represented by this Meta Major can choose any course listed under Area IV.

Area V – All of the majors represented by this Meta Major can choose any course listed under Area V.

A **Second Language** is required for Geology, Math-General, and Physics. For second language options and placement information, please see your advisor.

Exploratory Courses

Course	Gen Ed Area	Credits	Major Requirement for:
ASTR 105G or ASTR 110G	III	4	Astronomy minor (pair with BA in Physics to focus on Astrophysics)
BCHE 140	NA	1	Biochemistry
CHME 102	NA	3	Chemical Engineering
C E 151	NA	3	Civil Engineering
C S 111	NA	3	(prerequisite for C S 172 unless placed directly into C S 172)
C S 172	NA	4	Computer Science, Math-General
DRFT 109	NA	3	Surveying, Civil Engineering Technology
E E 100	NA	4	Electrical & Computer Engineering
EDUC 181	NA	1	Education (teaching field Math or Science)
ELA 250	NA	2	Education (teaching field Math or Science)
ENGR 100	NA	3	Required course for all engineering majors
ET 182	NA	3	Engineering Technology
GEOG 111G	III	4	Geography
GEOG 120G	IV	3	Geography
GEOL 111G or HON 219G	III	4	Geology and Civil Engineering
I E 151	NA	3	Industrial Engineering
ME 159	NA	3	Mechanical, Aerospace, Industrial Engineering
PHYS 150	NA	3	Physics (good option for students who place into MATH 190G)
PHYS 211/L	NA	4	Engineering Technology
PHYS 213/L, PHYS 214/L	NA	4	Chemistry (BS), Engineering Physics, Physics
PHYS 215 (L)	NA	3 (4)	Aerospace, Chemical, Civil, Electrical & Computer, Mechanical, Surveying Engr

New Mexico General Education Common Core

AREA I: COMMUNICATIONS (9-10 Cr.) (Select one from each group)

ENGL 111G, 111H; SPCD 111G
ENGL 203G, 211G, 218G, 311G, 318G
COMM 253G, 265G; HON 265G, AXED 201G

AREA II: MATH/ALGEBRA (3 Cr.)

MATH 112G, 121G, 142G, 190G, 191G, 192G, 210G, 275G, 291G,
A ST/STAT 251G, STAT 271G, HON 275G

AREA III: LABORATORY SCIENCE (8 Cr.) (Select 2 courses)

AGRO/HORT 100G
ANTH 130G&L
ASTR 105G, 110G
BIOL 101G&L, 110G, 111G&L, 211G&L.
CS 171G
CHEM 110G, 111G, 112G
ES 110G
FSTE 164G, 263G
GEOG 111G
GEOL 111G, 212G
HON 205G, 219
PHYS 110G, 120G, 211G&L, 212G&L, 215G&L, 216G&L, 221G, 222G

AREA IV: SOCIAL/BEHAVIORAL SCIENCES (6-9 Cr.)*

AG E/FSTE 210G
ANTH 120G, 125G, 201G, 202G, 203G
C EP 110G
C J 101G
ECON 201G, 251G, 252G
GEOG 112G, 120G
GOVT 100G, 110G, 150G, 160G
HON 203G, 232G, 235G, 237G, 248G, 249G
JOUR 105G
LING 200G
PHLS 150G
PSY 201G
S WK 221G
SOC 101G, 201G
WS 201G, 202G

AREA V: HUMANITIES AND FINE ARTS (6-9 Cr.)*

ART 101G, 110G, 295G, 296G
DANCE 101G.
HIST 101G, 102G, 110G, 111G, 112G, 201G, 202G, 211G, 212G, 221G, 222G
HON 208G, 216G, 220G, 221G, 222G, 225G, 226G, 227G, 228G, 229G, 230G,
234G, 239G, 241G, 242G, 244G, 270G
MUS 101G, 201G
PHIL 100G, 101G, 124G, 136G, 201G, 211G, 223G
THTR 101G

*Students must complete 15 total credits from Areas IV and V, with at least 6 credits from each area

For questions about New Mexico Common Core General Education Requirements, please **consult your Academic Advisor**. Academic Advisor contact information can be found at <http://advising.nmsu.edu/advising-directory/>