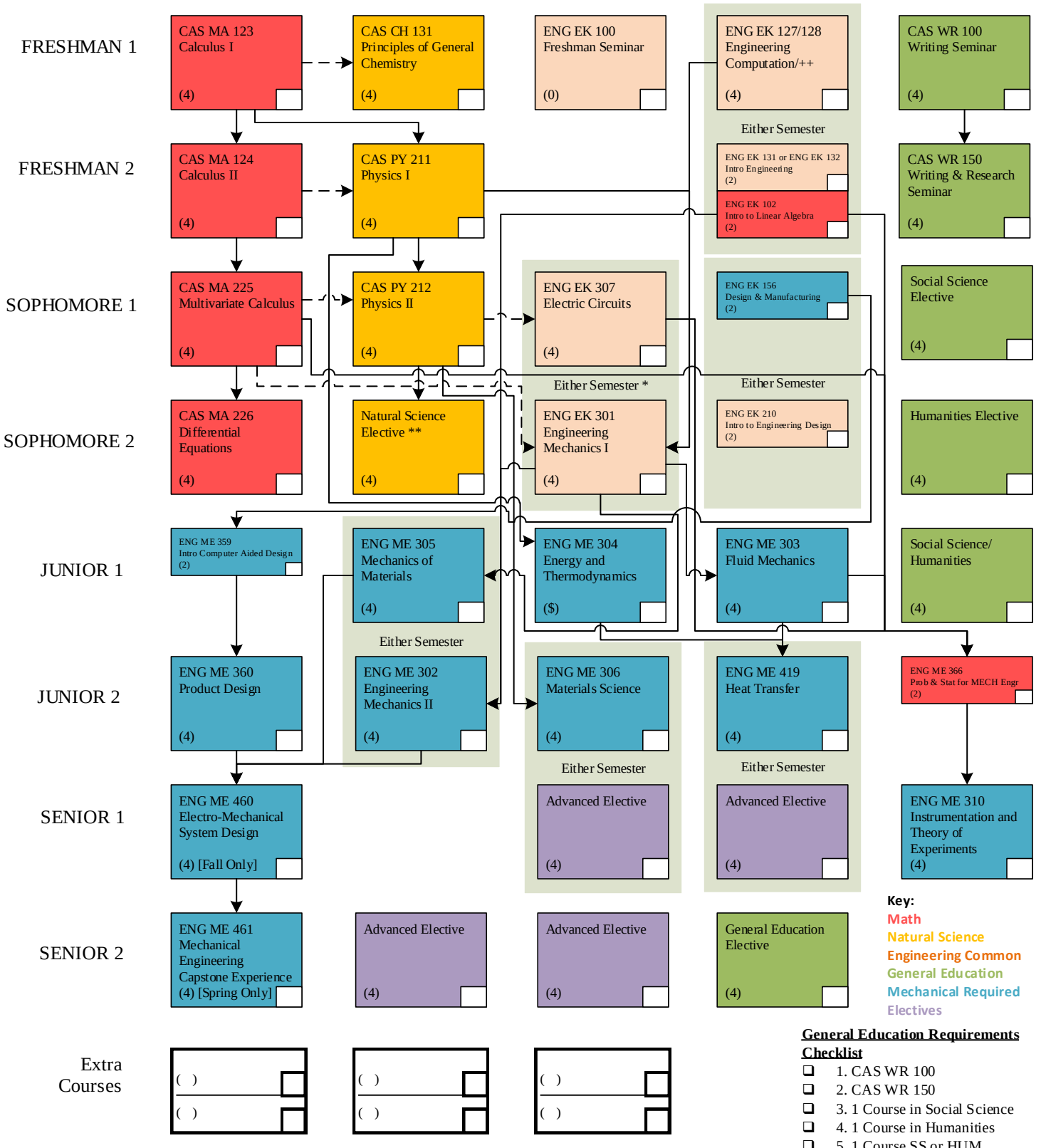
BU College of Engineering

Mechanical Engineering – 2019

Undergraduate Program Planning Sheet

NAME:_____ **U.I.D.#** U_____ **DATE:**_____



Prereq.= ⟶
Coreq.= ⟶

* Students who plan to study abroad in Sophomore 2 should take EK 301 in Sophomore 1
** Students who have successfully completed or have AP credit for both CAS CH 101 and CAS CH 102 have satisfied the Chemistry and Natural Science Elective requirements

- ❑ **GRADUATION REQUIREMENT: 136 credits**
- ❑ **ENG Credit Requirement**: 48 credits/Upper Division Program courses completed at Boston University

General Education Requirements Checklist

- ❑ 1. CAS WR 100
- ❑ 2. CAS WR 150
- ❑ 3. 1 Course in Social Science
- ❑ 4. 1 Course in Humanities
- ❑ 5. 1 Course SS or HUM
- ❑ 6. 1 Couse General Education Elective
- ❑ 7. Total of at least 24 credits

REQUIREMENTS

Mechanical Engineering majors are required to complete a minimum of 136 credits as detailed on the Program Planning Sheet on the other side of this form.

GENERAL EDUCATION COURSES

For a list of specific courses that satisfy the Social Science, Humanities, and the General Education Elective, please go to the College of Engineering Undergraduate Requirements website at: http://www.bu.edu/eng/current-students/ugrad/requirements/.

NATURAL SCIENCE ELECTIVE

The Natural Science Elective for Mechanical Engineering majors can be satisfied by:

- ENG BE 209 – Principles of Molecular Cell Biology & Biotechnology
- Astronomy (AS) - Any 200-level or higher course or any 100-level course that includes a lab
- Biology (BI) - Any 200-level or higher course or any 100-level course that includes a lab
- Neuroscience (NE) - All
- Chemistry (CH) - Any 200-level or higher course
- Physics (PY) - Any 300-level or higher course, CAS PY 231- The Physics in Music
- Earth Science (ES) - Any 300-level or higher course. Also the following:
  - CAS ES 101 – Dynamic Earth
  - CAS ES 105 – Environmental Earth Sciences
  - CAS ES 140 – Earthquakes, Volcanoes, Natural Disasters
  - CAS ES 142 – Intro Beach & Shoreline Processes
  - CAS ES 144 - Oceanography
  - CAS ES 222 - Mineralogy
- The following GE courses:
  - CAS GE 101 – Natural Environ: Atmosphere
  - CAS GE 104 – Natural Environ: Physical Landscape
  - CAS GE 110 – Our Changing Planet
  - CAS GE 302 – Remote Sensing of the Environment
  - CAS GE 307 – Biogeography
  - CAS GE 310 – Climate & the Environment
  - CAS GE 365 – Intro Geographic Information Systems
  - CAS GE 375 – Intro Quant Environmental Modeling
  - CAS GE 440 – Digital Image Proc & Remote Sensing
  - CAS GE 445 – Physical Models in Remote Sensing
  - CAS GE 448 – Remote Sensing of Vegetation
  - CAS GE 456 – Terrestrial Ecosystems & Carbon Cycle
  - CAS GE 483 – Geodynamics II: Fluids & Fluid Transport

ADVANCED ELECTIVES

Mechanical Engineering majors complete 4 Advanced Elective courses. Acceptable courses include **all engineering (ENG) courses 300 level or above** including ENG ME 452 and ENG ME 457, as long as there is not significant overlap with other courses being used for the degree (See **Notes** below). Acceptable courses outside of ENG include:

CAS AS 414 – Solar and Space Physics

SMG SI 480 – The Business of Technology Innovation

SMG SI 482 – Technology and its Commercialization

Additionally other 300-level or above Mathematics and Natural Science courses may be acceptable by petition.

DEGREE ENHANCEMENTS

CONCENTRATIONS

Students majoring in Mechanical Engineering may choose to add a Concentration in ***Aerospace Engineering***, ***Manufacturing Engineering***, ***Energy Technologies, Nanotechnology*** or ***Technology innovation***. A concentration requires 4 courses which can usually be used to satisfy Advanced Elective requirements (and in some cases General Education requirements). Hence, a concentration can usually be completed without requiring additional coursework. For information on concentrations go to: http://www.bu.edu/eng/academics/programs/concentrations/.

MINORS

Students may choose to add a minor in any one of the other degree programs or divisions ***(Materials Science & Engineering or Systems Engineering)*** within the College of Engineering. A minor consists of 5 courses, 2 of which may also be used to satisfy requirements for the major. Completing a Minor will add a minimum of 12 credits to the total for the degree. More information on minors and the specific requirements for each can at http://www.bu.edu/eng/academics/programs/minors/. Students may also pursue minors in other Colleges at Boston University. For more information, please contact the College of the minor.

DOUBLE MAJORS

Students may earn two engineering BS degrees. Double majors require a minimum of 162 credits and students must fulfill the requirements for each of the degree programs.

See http://www.bu.edu/eng/academics/special-programs/ for more details.

OTHER WAYS TO ENHANCE YOUR DEGREE

Students have several additional options available to them including **study abroad, research,** and **co-op/internship** opportunities. For more information on these programs, please visit the College of Engineering Undergraduate website: http://www.bu.edu/eng/academics/.

Notes:

For the following 9 sets of courses, only 1 course can be taken for credit in each set due to the overlap of material:

(1) ENG ME 305, ENG BE 420
(2) ENG ME 403, ENG ME 404, ENG BE 402, ENG EC 402
(3) ENG ME 303, ENG BE 436
(4) ENG ME 441, ENG ME 515
(5) ENG ME 501, ENG EC 501
(6) ENG EK 102, CAS MA 142, CAS MA 242
(7) ENG BE 401, ENG EC 401
(8) ENG ME 366, ENG EC 381, ENG BE 200, ENG EK 500
(9) ENG ME 359, ENG ME 407