## Mechanical Engineering Nuclear Concentration Course Flowchart for Students Entering the Program in Fall 2019 - Spring 2020 Freshman Freshman Sophomore Sophomore **Junior Junior ENGR 296** Senior Senior or 396 Fall Spring Fall Spring Fall Spring Fall Spring Internship ENGR 496 or **MATH 301 MATH 307** 130 credits Experience **MATH 200 MATH 201** Internship Differential Multivariate required to or FNGR Calculus I Calculus II Review or Equations Calculus graduate 398 Co-Op 4 hrs. 4 hrs. **ENGR 498** 3 hrs. 4 hrs. Experience Review of Co-0 hrs. **EGMN 315** Op Exp. 0 hrs. **EGMN 321 EGRE 206 EGMN 103** Process and Numerical Electric System Dyn. Mechanical & Methods Circuits 3 hrs. Spring Nuclear Engr 3 hrs. Fall 4 hrs. Spring Practicum I **EGMN 309 MGMT 310** 1 hr. Fall Material Managing **EGMN 215** Science People in Orgs **EGMN 190** Engineering **FGMN 420 EGMN 312** Prerequisites 3 hrs. Fall 3 hrs. Junior **ENGR 395** ntroduction to /isualization & **CAE** Design Thermal for EGMN Mechanical & Professional 402: complete Computation 3 hrs. Fall Sciences Lab **ENGR 403** 2 from EGMN Nuclear Engr Development ENGR402 3 hrs. Spring 1.5 hrs. Spring Senior Design 300, 303 and Senior Design 1 hr. Fall 1 hr. Studio II 420 AND Studio I 1 hr. Spring complete 5 1 hr. Fall **EGMN 301 CHEM 101** from EGMN **EGMN 302 PHYS 207 PHYS 208 EGMN 204** Fluid General 300, 301, 302, Heat Transfer Physics I Physics II Thermo 303, 315, 321, Mechanics Chemistry I 3 hrs. Spring 5 hrs. 5 hrs. 3 hrs. Spring 355, 420, 421, **EGMN 403** 3 hrs. Fall 3 hrs. **FGMN 402** 416 and 455 Senior Design Senior Design Lab II Lab I 2 hrs. Spring **EGMN 303** 2 hrs. Fall **EGMN 202 CHEZ 101 EGMN 311 EGMN 102** Thermal Sys. Mechanics of General Solid Mech. Science Statics **EGMN 456** Design Deformables Chemistry Lab Lab Elective 3 hrs. Reactor 3 hrs. Spring 3 hrs. 1 hr. 1.5 hrs. Fall Design and in summer after junior yr.) (2-3 full-time work terms core list) **EGMN 455** Systems full-time work terms iman & senior years) 3 hrs. 3 hrs. Fall Nuclear Power **EGMN 201 Plants** Dynamics and **EGMN 300** Nuclear **Kinematics** 3 hrs. Spring **EGMN 351** Mechanical Engineering Social Science 3 hrs. Nuclear **EGMN 203** Elective Sys. Design Elective **EGMN 453** Nuclear Engineering 3 hrs. Spring Mechanical & 3 hrs. Fall (from VCU **Economics of** Engineering **Fundamentals** Choose 1 from Nuclear Engr. core list) **EGMN 352 Nuclear Power** 3 hrs. Fall Elective Practicum II EGMN 356. **EGMN 355** 3 hrs Nuclear Production 3 hrs. Spring 450, 451, 510, 1 hr. Spring Radiation Reactor 3 hrs. Fall Choose 1 from 530 & 545 or a Safety & Theory EGMN 356. pre-approved Shielding Required 3 (typically i or Co-Op (between fr 3 hrs. Spring **UNIV 200** 450, 451, 510 **UNIV 111 PHIL 201 UNIV 112** course 3 hrs. Fall Writing and 530 & 545 or a Crit. Thinking Focused Focused Rhetoric pre-approved about Moral Inquiry I Inquiry II 3 hrs course **Problems** 3 hrs. 3 hrs. 3 hrs. 16 hrs. 16.5 hrs. 17.5 hrs. 15 hrs. 16 hrs. 16 hrs. 18 hrs. 15 hrs. Engineering Math **Business** Students must earn a minimum grade of C in UNIV 112

Fall = May Only Be Offered in Fall Semesters Prerequisite Course Course Arrows Course and 200; PHYS 207; all EGMN, ENGR, and MATH Spring = May Only Be Offered in Spring (Any Color) ....▶ Corequisite courses used to fulfill graduation requirements; and all Junior = Junior Standing to Enroll Science Nuclear Eng. VCU Core courses used to fulfill technical elective requirements. Course Course Course Please refer to the VCU Undergraduate Bulletin for the official list of required courses.