

TSM - Advising CHECKLIST

Student Name _____

ID: _____ GPA _____

DATE: _____ Advisor: _____

A. Natural Science courses

One of the following sequences:

_____ a. PHY131 and PHY 132, 134 Classical Physics I, II and labs
Note: The following alternate physics course sequences may be substituted

- PHY 131-133 and 132-134.
- PHY 121-123, and 122-124
- PHY 125, 126, 127
- PHY 141,142

_____ b. BIO 150 the Living World, and BIO 201, Fundamentals of Biology: Organisms to Ecosystems

_____ c. CHE 131,132,133 General Chemistry I, II and lab **OR**
 CHE 141,142,143 General Chemistry I, II Honors and lab

_____ d. GEO 102,112 the Earth/Physical Geology Lab and GEO304 Energy, Mineral Resources, and the Environment or GEO311 Geoscience and Global Concerns

_____ e. BIO 201 Principles of Biology: Organisms to Ecosystems **and one of the following:**

- _____ GEO 101 Environmental Geology
- _____ MAR 104 Oceanography
- _____ ATM 102 Weather and Climate
- _____ ENS 101 Prospects for Planet Earth

B. Mathematics courses

- _____ AMS 151 Applied Calculus I
- _____ AMS 161 Applied Calculus II

OR the following alternate calculus course sequences may be substituted

- _____ MAT 125, MAT 126, MAT 127 **OR**
- _____ MAT 131, MAT 132 or MAT 171 **OR**
- _____ MAT 141, MAT 142 or MAT 171

C. Study in Related Areas - Specialization

A cluster of seven related courses, totaling at least 21 credits, in one area of natural science, engineering, applied science, or environmental studies from a single department or program. At least three courses, totaling at least nine credits, must be at the 300 or 400 level.

Area of Specialization

D. Upper Division Writing Requirement

All degree candidates must demonstrate skill in written English at a level acceptable for technological systems management majors. To satisfy this requirement, a TSM major must submit a paper written for an upper-division EST course for review. Students whose writing does not meet the required standard are referred for remedial help. The requirement may also be met by earning a grade of C or higher in a writing-intensive course approved by the department or, if the student has a double major, by satisfying the upper-division writing requirement in the other major.

ALL COURSES MUST BE TAKEN FOR LETTER GRADES

F. TSM Requirements

Any course taken to fulfill the required courses cannot be used to satisfy the elective area.

Eleven required courses:

- _____ EST 192 Introduction to Modern Engineering(S)
- _____ EST 194-C Patterns of Problem Solving(F)
- _____ EST 202 Intro to Science, Tech and Society Studies(F)
- _____ EST 305 Applications Software for Information Management(S)
- _____ EST 326 Management for Engineers(S)
- _____ EST 327 Marketing for Engineers(F)
- _____ EST 391-H Technology Assessment(F)
- _____ EST 392 -F Engineering and Managerial Economics(S)
- _____ EST 393 Project Management(S)
- _____ EST 440 Interdisciplinary Research Methods(F)
- _____ EST 441 Interdisciplinary Senior Project(S)

(If 192 & 194 are waived then you must take 304 & 320)

Three courses chosen from the following:

- _____ EST 213 Studies of Nanotechnology(F)
- _____ EST 291 Energy, Environment & People (S)
- _____ EST 304 Communication for Engineers and Scientists(F)
- _____ EST 310 Design of Computer Games(F)
- _____ EST 320-H Comm. Technology Systems(online) (F,S)
- _____ EST 323 Human Computer Interaction(S)
- _____ EST 331 Professional Ethics and Intellectual Property(F)
- _____ EST 341 Treatment Technologies(F)
- _____ EST 488 Internship in TSM

Other 300/400 level courses in the area of specialization are allowed upon the approval of the TSM advisor

Matrix for all the required courses:

	FALL	SPRING
Freshman	192	194
Sophomore	202	305, 392
Junior	327, 391	326, 393
Senior	440	441

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