**B.S. PHYSICS/PRE-ENGINEERING CHECK SHEET**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Date** |  | **Grade** |  | **Date** |  | **Grade** |
| **Taken** |  | **Rec’d** |  | **Taken** |  | **Rec’d** |
| ***Learning Skills (9 cr)*** |  |  |  | ***Physics Requirements\*\* (34 cr)*** |  |  |  |
| ENGL 101 Composition I (3) |   |  |   | PHYS 231 Electronics (4) |   |  |   |
| ENGL 202 Composition II, Soph level (3) |   |  |   | PHYS 331 Modern Physics† (3) |   |  |   |
| MATH 125 Calculus I/ Physics, … (3) |   |  |   | PHYS 342 Thermal & Stat Physics (3) |   |  |   |
|  |  |  |  | PHYS 345 Optics† (3) |   |  |   |
| ***Humanities (9 cr)*** |  |  |  | PHYS 350 Intermediate exp Phys (3) |   |  |   |
| HIST 195/196/197 US/Europe/Global (3) |   |  |   | PHYS 401 Theoretical Physics (3) |   |  |   |
| ENGL 121/ FNLG 121 Humanities Lit (3) |   |  |   | PHYS 441 Classical Mechanics† (3) |   |  |   |
| PHIL 122/ RLST 110 (3) |   |  |   | PHYS 451 Electricity & Magnetism† (3) |   |  |   |
|  |  |  |  | PHYS 461 Quantum Mechanics (3) |   |  |   |
| ***Fine Arts (3 cr)*** |  |  |  | PHYS 472 Nuclear Physics (3) **or** |   |  |   |
| ARHI 101 Intro to Art (3) **or** |  |  |  | PHYS 490 Solid State Physics  |  |  |  |
| MUHI 101 Intro to Music (3) **or** |  |  |  | PHYS Elective  |   |  |   |
| THTR 101 Intro to Theater (3) **or** |  |  |  | PHYS \_\_\_\_\_ - (3) |   |  |   |
|  |  |  |  |  |  |  |  |
| ***Natural Science (8 cr)*** |  |  |  | ***Other Requirements (24 – 30 cr)*** |  |  |  |
| PHYS 131 Physics I-Calc (3) |   |  |   | COSC 110 Problem Solving & Struct. Prog (3) |   |  |   |
| PHYS 132 Physics II- Calc (3) |   |  |   | COSC 250 Intro Numerical Method (3) |   |  |   |
| PHYS 141 Physics I-Calc Lab (1) |   |  |   | MATH 225 Calculus III – Physics (3) |   |  |   |
| PHYS 142 Physics II -Calc Lab (1) |   |  |   | MATH 241 Differential Equations (3) |   |  |   |
|  |  |  |  | MATH 342 Adv. Math for App (4) |   |  |   |
| ***Social Sciences\* (9 cr)*** |  |  |  | CHEM 111 General Chemistry I (4) |   |  |   |
|   |   |  |   | CHEM 112 General Chemistry II (4) |   |  |   |
|   |   |  |   |  |   |  |   |
|   |   |  |   | *Foreign Language § (0-6 cr)* |  |  |  |
|  |  |  |  |  |  |  |  |
| ***Dimensions of Wellness (3-4 cr)*** |  |  |  | ***Free Electives (4-12 cr)*** |  |  |  |  |
| HPED/ FDNT/ 143 (3) |  |  |  |   |   |  |   |   |
| MLSC 101, 102 (4) |   |  |  |  |   |  |   |   |
| ECON/ COSC 143 (3) |   |   |  |  |   |  |   |   |
|  |  |  |  |  |   |  |   |   |
| ***Liberal studies Electives (3cr)*** |  |  |  |   |   |  |   |   |
| MATH 126 Calculus II/ Physics, … (3) |   |   |   | ***Total Degree Requirement (120 cr)*** |   |  |  |   |
|  |  |  |  |  |  |  |  |  |
| ***Liberal studies total (44)*** |   |  |  | Cumulative GPA of 3.0 or greater is required for transfer to Pitt campus. Two years at Pitt school of Engineering (~ 64 cr); as many as 30 cr from Pitt may be transferred back to IUP towards physics BS degree. An average 2.0 GPA (in major courses) is required for graduation with a physics BS. Application deadline for Fall transfer to Pitt is Jan of that year; submit Fall grades and registered Spring courses. Check with your advisor for details. |
|  |  |  |  |
| ***Controlled electives (6 – 8 cr)*** |  |  |  |
|  |  |  |  |
| *Chemica Engineering, Materials Sci & Engg:*  |  |  |  |
| Chem 231, 232 Organic Chemistry I & II (8 cr) |  |  |  |
|  |  |  |  |
| *Civil, Electrical, Mechanical Engineering:* |  |  |  |
| MATH 216 Prob and Stat for Nat Sci. (3 cr) |  |  |  |
| Technical elective (3 -4 cr) |  |  |  |
|  |  |  |  |  |  |  |  |  |
| *Mechanical Engineering:*Technical Electives (6 – 8 cr) |  |  |  |  |  |  |  |  |

Technical electives selected in consultation with the student’s advisor.

\* If one of these courses does not meet the Non-Western cultures requirement, then an elective must be used.

\*\* Some of these courses may be completed at University of Pittsburgh along with free electives (4 - 12 cr.)

to be transferred back to obtain a BS in Physics from IUP.

† Required by all BS Physics tracks.

***§*** Six credits of computer programming language will substitute for foreign language requirement:

 COSC 110, 210, or higher level COSC courses (COSC 250 recommended), with department permission.

Last modified 5/19/2016