DEGREE REQUIREMENTS CHECKLIST

THIS OPTION IS DESIGNED TO PROVIDE THE NECESSARY FOUNDATION AND HANDS-ON SKILL IN COMPUTATION FOR THE STUDENT WHO PLANS A CAREER OR FURTHER STUDY IN COMPUTATIONAL PHYSICS OR COMPUTER SCIENCES. STUDENTS WHO COMPLETE THIS OPTION ALSO FULFILL THE REQUIREMENTS OF THE ELEMENTS OF COMPUTING PROGRAM AND MAY APPLY TO THE DIRECTOR OF THE PROGRAM FOR A CERTIFICATE OF COMPLETION.

This checklist below provides a summary of the requirements for the degree and major indicated above. For complete information, you should consult the Undergraduate Catalog 2000-2002. If you have any questions, please speak with an academic advisor at RLM 4.101.

PRESCRIBED WORK: THESE COURSES MUST BE TAKEN ON A LETTER-GRADE BASIS.

1. · English: ❑ RHE 306 ❑ E 316K
   · Substantial Writing Component: ❑ One upper-division course* ❑ One additional course

   **This requirement can be fulfilled by completion of PHY 329 and 453.*

   These two courses may satisfy other degree requirements. They can be any number of semester hours. Consult the Course Schedule for a complete listing of writing component courses for a particular semester.
2. Foreign Language: Choose from one the following options:

   Second semester proficiency in a single foreign language at the college level:

   ❑ 506 and ❑ 507 (or equivalent) or

   ❑ 506 and Foreign culture course from the same culture area, or

   ❑ two foreign culture courses from approved list, or

   ❑ one foreign culture course and an additional course chosen from Plan I area B or D
3. Government: ❑ GOV 310L (or GOV 3 TX in transfer) ❑ GOV 312L (or GOV 3 US in transfer)
4. U.S. History: 6 semester hours of American History *(3 hours of Texas History may be used toward one of the U.S. History requirements)*

   ❑ _____ ❑ _____
5. 3 semester hours from **one** of the following areas:

   ❑ Anthropology ❑ Economics ❑ Geography ❑ Linguistics ❑ Psychology ❑ Sociology
6. ❑ CH 301 ❑ CH 302 ❑ CH 204* (or 317) **Waived if student places out of CH 301.*
7. ❑ 3 semester hours of Biology

   ❑ At least 2 semester hours in Biology, Geology, or Astronomy (*AST 307 ok*)

   NOTE: *A course may not be used to fulfill these requirements if it cannot be counted toward major requirements in the department that offers it.*
8. 3 semester hours from **one** of the following areas:

   ❑ Architecture ❑ Classics Department ❑ College of Fine Arts ❑ Philosophy (not logic)

PRESCRIBED WORK FOR OPTION II: ALL OPTION REQUIREMENTS MUST BE TAKEN ON A LETTER-GRADE BASIS. A GPA OF AT LEAST 2.0 IN THESE PHYSICS COURSES IS REQUIRED.

· 22 semester hours of mathematics at the level of M 408C and above. The following courses are recommended:

Only courses at the level of calculus or above may be counted toward the total number of hours required for the degree.

❑ M 408C* ❑ M 408D* ❑ M427K* ❑ M427L* ❑ M340L ❑ M361

**These courses are prerequisites for upper-division physics courses.*

UPPER-DIVISION PHYSICS:

NOTE*: Although they are not part of the degree requirements, lower division PHY courses such as PHY 301, PHY 316, PHY 315, PHY 101L, PHY 116L, PHY 115L, or an equivalent physics sequence approved by the Undergraduate Advisor, must be completed before taking these upper division physics courses.*

· 26 semester hours of upper-division physics courses consisting of:

❑ PHY 329	Introduction to Computational Physics
❑ PHY 336K	Classical Dynamics I
❑ PHY 352K	Classical Electrodynamics
❑ PHY 453	Modern Physics I: Introduction to Quantum Phenomena
❑ PHY 369	Thermodynamics and Statistical Mechanics
❑ PHY 373	Modern Physics II: Quantum Mechanics
❑ PHY 474	Advanced Laboratory I (Senior Lab)
❑ _____	3 additional upper-division semester hours in Physics

ADDITIONAL OPTION REQUIREMENTS

❑ CS 303E	Elements of Computers and Programming

- ❑ CS 313E Elements of Software Design

· 6 semester hours chosen from:

- ❑ CS 323E Elements of Scientific Computing
- ❑ CS 324E Elements of Graphics and Visualization
- ❑ CS 326E Elements of Networking
- ❑ CS 327E Elements of Databases

All CS courses in the sequence must be completed with a grade of C or better for certification.

SAMPLE COURSE PLAN

FRESHMAN YEAR			NOTES
Semester 1	*Semester 2*	*Summer 1*	
M 408C	M 408D	CH 204	
RHE 306	CH 302	HIS 315K	
PHY 110C or 1 hr elv	PHY 110C or 1 hr elv		
CH 301	PHY 301/PHY 101L		
Social science requirement (3 hrs)	CS 303E		
SOPHOMORE YEAR			
Semester 1	*Semester 2*	*Summer 2*	
M 427K	M 427L	GOV 312L	
M 340L	PHY 315/PHY 115L	HIS 315L	
CS 313E	PHY 110C or 1 hr elv	BIO 211	
PHY 316/PHY 116L	GOV 310L		
PHY 110C or 1 hr elv	AST 307 or 2 hrs major level AST, BIO or GEO and 1 hr elv		
JUNIOR YEAR			
Semester 1	*Semester 2*		
PHY 336K	PHY 352K		
PHY 453	PHY 373		
M 361	Elements of Computing upper division (3 hrs)		
E 316K	Foreign culture requirement (3 hrs)		
Elective (2-3hrs)	BIO 212		
SENIOR YEAR			
Semester 1	*Semester 2*		
PHY 329	PHY 474		
PHY 369	PHY upper division (3hrs)		
Writing Component (3hrs)	Elements of Computing upper division (3 hrs)		
Foreign culture requirement (3 hrs)	General Culture (3hrs)		

ELECTIVES

· Electives are necessary to complete the **126-semester-hour requirement** for the B.S. in Physics.
· Once 30 hours of college credit is earned, up to 16 semester hours of electives may be taken pass/fail.
· Only two courses per semester may be taken pass/fail.

GENERAL DEGREE REQUIREMENTS: YOU MUST SATISFY ALL OF THE FOLLOWING CONDITIONS IN ORDER TO GRADUATE.

· Minimum cumulative UT GPA of 2.0
· 30 semester hours must be completed in residence (in the classroom at UT).
· 24 of the last 30 semester hours counted toward the degree must be completed in residence.
· 18 upper-division semester hours must be completed in residence.
· 12 semester hours of upper-division coursework in the major must be completed in residence.
· 36 semester hours of the coursework must be upper-division.

The following courses will not count toward this degree: M301, KIN 119 or PED one-hour activity courses. No more than 12 semester hours of Bible coursework may be counted toward the degree. See catalog for restrictions about using ROTC coursework.