



## *Florida Institute of Technology*

Matt A. Wood, Professor  
Department of Physics & Space Sciences

19 October 2006

To: Undergraduate Curriculum Committee  
From: Matt A. Wood, Dept. of Physics and Space Sciences  
Re: Proposed new *Option in Astrobiology* undergraduate degree under Space Sciences

The proposed **Space Sciences: Option in Astrobiology** will serve a growing number of students interested in pursuing graduate studies in this new and growing field. At the current time, we are not aware of any other undergraduate programs in astrobiology, although a handful of graduate programs exist. The proposed program is both interdisciplinary and very rigorous. It includes the essential courses from both Space Sciences and Biology, and a very strong chemistry component. A student who completes this program will be in an excellent position to excel in graduate studies in any of the 3 component programs (Astrophysics / Biology / Chemistry). As a side note, this program is also an excellent pre-med program and could be marketed as such.

No new courses are required for this major at this time, although we anticipate adding a 'capstone' course within 2-3 years.

Dr. Samuel Durrance will be the Adviser for this new program.

Sincerely yours,

Matt A. Wood, Professor  
Dept. of Physics and Space Sciences

Please provide the following information when requesting a new major or minor (programs and options) to be added to the curriculum. A code will be assigned by the Office of the Registrar and a copy of this form will be mailed to the appropriate department.

COLLEGE \_\_\_\_\_ SITE(S) \_\_\_\_\_

DEPARTMENT \_\_\_\_\_ CAMPUS(ES) \_\_\_\_\_

PROGRAM TO BE ADDED  Major  Minor

- LEVEL  Bachelor of Arts (B.A.)  Executive Master of Business Administration (E.M.B.A.)  Educational Specialist (Ed.S.)  
 Bachelor of Science (B.S.)  Master of Arts (M.A.)  Doctor of Education (Ed.D.)  
 Master of Arts in Teaching (M.A.T.)  Doctor of Philosophy (Ph.D.)  
 Master of Business Administration (M.B.A.)  Doctor of Psychology (Psy.D.)  
 Master of Education (M.Ed.)  Graduate Certificate  
 Master of Public Administration (M.P.A.)  
 Master of Science (M.S.)  
 Master of Science in Aviation (M.S.A.)  
 Professional Master of Business Administration (P.M.B.A.)

PROGRAM TITLE *Restricted to 30 characters, including spaces*

\_\_\_\_\_

TERM TO BE INITIATED \_\_\_\_\_ ADVISER FOR NEW PROGRAM \_\_\_\_\_

**APPROVALS: Upon completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee and Provost for approval below, and forward to Office of the Registrar.**

\_\_\_\_\_  
*Department Head/Program Chair* *Date*

\_\_\_\_\_  
*Dean or Associate Dean* *Date*

\_\_\_\_\_  
*Chair, Graduate Council* *Date*

OR

\_\_\_\_\_  
*Chair, Undergraduate Curriculum Committee* *Date*

\_\_\_\_\_  
*Provost* *Date*

**REGISTRAR'S USE ONLY**

FSA ATLAS _____	SOAXREF _____	SMAPRLE _____
STVMAJR _____	SOACURR _____	Major Code Assigned _____
SOAXCUR _____	CIPC Code _____	Operator Initials/Date _____

**DISTRIBUTION**  
 Original – Registrar  
 Copy – Academic Unit

## Space Sciences - Astrobiology

### *Freshman Year*

#### **FALL**

CHM	1101	Chem 1	4
COM	1101	Comp/Rhet	3
MTH	1001	Calc 1	4
PHY	1050	P/SS Seminar	1
SPS	1020	Intro to Space Sciences*	3
			<b>15</b>

#### **SPRING**

CHM	1102	Chem 2	4
MTH	1002	Calc 2	4
PHY	1001	Phys 1	4
PHY	2091	Phys 1 Lab	1
SPS	1010	Intro to Astronomy	3
			<b>16</b>

### *Sophomore Year*

#### **FALL**

BIO	1010	Bio Discovery 1	4
COM	1002	Writing about Literature	3
MTH	2001	Calc 3	4
PHY	2002	Phys 2	4
PHY	2092	Phys 2 Lab	1
			<b>16</b>

#### **SPRING**

BIO	1020	Bio Discovery 2	4
COM	2223	Sci/Tech Comm	3
CSE	15xx	Restricted Elective (CSE)	3
MTH	2201	Diff Eq/Lin Algebra	4
PHY	2003	Modern Phys	3
			<b>17</b>

### *Junior Year*

#### **FALL**

BIO	2110	General Genetics	4
CHM	2001	Organic Chemistry 1	3
PHY	3001	Physical Mech	4
PHY	3060	Thermo/KinThe/StatPhys**	4
			<b>15</b>

#### **SPRING**

BIO	2010	Microbiology	4
CHM	2002	Organic Chemistry 2	3
HUM	2051	Civ 1	3
PHY	3035	Quantum Mech**	4
PHY	3440	E&M	3
			<b>17</b>

### *Senior Year*

#### **FALL**

BIO	3071	Evolution	3	
BIO	4010	Biochemistry 1	4	
HUM	2052	Civ 2	3	
SPS	4010	Astrophysics 1	3	
SPS	4200	Senior Seminar 1	1	
			Humanities Elective	3
			<b>17</b>	

#### **SPRING**

BIO	4101	Molecular Biology	3	
BIO	4110	Biochemistry 2	4	
SPS	4030	Physics of the Atmosphere	3	
SPS	4035	Comparative Planetology	3	
SPS	4210	Senior Seminar 2	1	
			Social Science Elec	3
			<b>17</b>	

**TOTAL CREDITS REQUIRED 130**

\*Students will be block registered into SPS 1020. If a student places into Calculus 2, the student is encouraged to take Physics 1 their first semester, and take SPS 1020 or another SPS course later in their program.

\*\*Students may elect to substitute CHM 3001/3002 Physical Chemistry 1/2 along with CHM 2011 Physical Chemistry Laboratory (total 8 credits) in place of PHY 3035 Quantum Mechanics and PHY 3060 Thermodynamics/Kinetic Theory/Statistical Physics (total 8 credits)

11 October 2006 - M. Wood  
Approved by PSS Dept 11 Oct 2006