COURSE SYLLABUS

1. **Program of Study**: Bachelor of Science (Physics)
   Faculty/Institute/College: International College, Mahidol University

2. **Course Code**: ICPY 474
   Course Title: Astrophysics

3. **Number of Credits**: 4 (4-0-8) (Lecture/lab/Self-study)

4. **Prerequisites**: None

5. **Type of Course**: Elective Major Course

6. **Session / Academic Year**: 1st, 2nd or 3rd Trimester/every academic year

7. **Course Conditions**: None

8. **Course Description**:
   Fundamental astronomical parameters, Orbit theory, Potential theory, Steller kinetic theory, Stellar structure and evolution.

9. **Course Objectives**:
   After successful completion of this course, students will be able to
   9.1 develop key concepts in the topics of fundamental astronomical parameters, orbit theory, potential theory, Steller kinetic theory, Stellar structure and evolution.

10. **Course Outline**

Week	Topics	Hours			Instructor
		Lecture	Lab	Self study	
1-2	Fundamental astronomical parameters	8	-	16	Assoc.Prof.David Ruffolo
3-4	Orbit theory	8	-	16	Assoc.Prof.David Ruffolo
5-6	Potential theory	8	-	16	Assoc.Prof.David Ruffolo
7	Midterm Examination	4	-	-	Assoc.Prof.David Ruffolo
8-9	Steller kinetic theory	8	-	16	Assoc.Prof.David Ruffolo
10-11	Stellar structure and evolution	8	-	16	Assoc.Prof.David Ruffolo
Final Examination					
Total		48	-	80	

11. Teaching Method *(s)*

11.1 Lecture
11.2 Suggested readings
11.3 Discussion in class

12. Teaching Media

12.1 PowerPoint Presentations
12.2 Texts and teaching materials

13. Measurement and Evaluation of Student Achievement

Student achievement is measured and evaluated by

13.1 the ability to describe the key concepts on the fundamental astronomical parameters, orbit theory, potential theory, Steller kinetic theory, Stellar structure and evolution.

Student's achievement will be graded according to the college and university standard using the symbols: A, B+, B, C+, C, D+, D and F.

Ratio of mark	
Mid-term examination	40%
Final examination	40%
Attendance and assignment	20%
Total	100%

14. Course Evaluation

14.1 Evaluate as indicated in number 13 above.
14.2 Evaluate student's satisfaction towards teaching and learning of the course using a questionnaire.

15. References:

Chaisson E, McMillion S. Astronomy today. UK: Benjamin Cummings; 2007.

16. Instructors:

Associate Professor David Ruffolo

17. Course Coordinator:

Assistant Professor Dr. Santi Watanayon