

UNIVERSITY OF MASSACHUSETTS, AMHERST

DEPARTMENT OF ASTRONOMY/FIVE COLLEGE ASTRONOMY DEPARTMENT

Amherst, Massachusetts 01003

Students Accepted For Degree	FIELDS		
	Physics	Astronomy	Related Fields
Doctorate		X	
Master's		X	

Address housing inquiries to: Housing Assignments Office, 235 Whitmore Bldg. (individual); Family Housing, Wysocki House, 911 N. Pleasant St., Amherst, MA 01002 (family). Housing information and rates can be found at <http://www.housing.umass.edu>

Residential student housing available: Yes

Family student housing available: Yes

1. General

Dean of Graduate School: John R. Mullin

Chair of Five College Astronomy Dept.: Ronald L. Snell

Head of UMass Astronomy Department: Stephen E. Schneider

Department Telephone Number: (413) 545-2194

Department Fax Number: (413) 545-4223

World Wide Web Site: <http://www.astro.umass.edu>

Type of Institution: University

Control: Public

Setting: Small town

Total Faculty: 1,322

Total Graduate Faculty: 1,076

Total Students: 20,539

Total Graduate Students: 5,820

Annual Graduate Tuition:

For 2009–10 rates: see <http://www.umass.edu/gradschool/> and click on “Prospective Students”.

Deferred tuition plan: No

Term: Semester

Table A—Faculty, Enrollments, and Degrees Granted

Research Specialty	2008–09 Faculty ³	Enrollment ¹ Fall 2008		No. of Degrees Granted ² 2008–09 (2004–09)			Median No. of Years for 2008–09 Ph.D.'s
		Master's	Doc-torate	Master's	Terminal Master's	Doc-torate	
Astronomy/ Astrophysics	23	0	26	0(4)	0(3)	4(11)	6
Total		0	26	0(4)	0(3)	4(11)	
Full-time Grad. Stud.		0	26				
Part-time Grad. Stud.		0	0				
First-year Grad. Stud.		0	7				
Median Years in Grad. Study (2008–09 Degrees)		–	–	–	–	–	–
Undergraduate Degrees, 2008–09: (2004–09)				15(80)			

¹ Students not yet committed to a research specialty are entered under non-specialized.

² Five-year totals in parentheses.

³ Includes Research Faculty

2. Admission, Financial Aid, and Housing

Address admission and financial aid inquiries to: Chair, Graduate Admissions Committee, Astronomy, LGRT B, 619E, Univ. of Mass., 710 North Pleasant Street, Amherst, MA 01003-9305

E-Mail Address: grad@astro.umass.edu

Graduate application fee required: \$40 for Massachusetts residents, \$50 for U.S. citizens and permanent residents; \$65 for international students

Admission deadline (Fall admission): February 1

Financial aid deadline: February 1 for fellowship consideration
February 1 for assistantship consideration

Loans available: No

Admission requirements: For admission to the graduate program, a Bachelor's degree in a related field is required with a minimum undergraduate GPA of 3.00 specified. The average GPA for 2008–09 admissions was 3.50. The GRE is required. The average GRE scores for 2008–09 admissions were 517 verbal, 760 quantitative, 733 physics. The GRE Physics is required and a minimum suggested score for admission is 600. Students from non-English speaking countries are required to demonstrate proficiency in English via the TOEFL exam. Applicants taking the paper-based test must score 550 or above; those taking the computer-based test must score 213 or above; those taking the internet-based test must score 80 or above.

3. Graduate Degree Requirements

Master's: 30 graduate credits with a “B” average, with no more than six transferred. Of these, 21 must be in the major field. Degree must be finished in three years. There is no language or thesis requirement.

Doctorate: Admission to candidacy for the doctorate is based on two research projects followed by oral exams and satisfactory completion of graduate astronomy and physics course work. A written dissertation, an oral defense, and one-year residency are required for the degree. There is no foreign language requirement.

Thesis: Thesis may be written *in absentia*.

Special Equipment, Facilities, or Programs: The Department operates a high performance parallel Beowulf type computer with 256 processors, and is the U.S. partner in an international project with Mexican institutes to build a 50-m diameter telescope, which will operate at millimeter wavelengths. The Large Millimeter Telescope (LMT) will be completed in 2010, and will be the world's largest single-dish millimeter-wave telescope. Its enormous collecting area and high angular resolution will enable cosmological studies of forming galaxies in the early universe, as well as detailed mapping of sources within our own Galaxy with unprecedented sensitivity. Further information about our graduate program and the research within the Department can be found on our web site at URL <http://www.astro.umass.edu>

Table B—Appointments to Graduate Students, 2007–08

Title of Appointee	Appointments		Academic Load Allowed in Credit Hours	Hours of Service Per Week	Stipend for Academic Year (\$)
	Total	First year			
Semester					
Teaching Assistant	6	4		20	15,063 ¹
Research Assistant	16	0		20	15,063 ^{1,2}
Other (specify)					
Northeast Alliance Fellowship	2	2			
Gov't of Thailand Fellowship	1	1			16,077
Total	25	7			

¹ Plus waiver of all tuition and most fees.

² Summer appointments available at academic year rates.

Table C—Separately Budgeted Research Expenditures¹

Research Specialty	No. of Grants	Expenditures (\$)
Astronomy/Astrophysics	50	2,891,478
Total	50	2,891,478

¹ Total expenditures, 7/01/07–6/30/08.

FACULTY

Professors

- Calzetti**, Daniela, Ph.D., U. Rome, Italy, 1992. UV optical and infrared astronomy; star formation and stellar feedback in galaxies; the relation between star formation and gas/dust components in galaxies; dust absorption and emission.
- Dennis**, Tom, Ph.D., Princeton, 1970. Galaxy photometry.
- Edwards**, Suzan, Ph.D., Hawaii, 1980. Star formation; stellar evolution; circumstellar environment of young stars.
- Greenstein**, George S., Ph.D., Yale, 1968. Relativistic astrophysics and neutron star physics.
- Irvine**, William M., Ph.D., Harvard, 1961. Radio astronomy and the interstellar medium; solar system physics.
- Katz**, Neal S., Ph.D., Princeton, 1989. Numerical simulations of the early universe; galaxy formation; modeling the Lyman alpha forest.
- Mo**, Houjun, Ph.D., Munich University, 1991. The study of galaxy formation, using numerical simulations, analytic models, and statistical comparison with observations.
- Schloerb**, F. Peter, Ph.D., Cal. Tech., 1978. Director, Five College Radio Astronomy Observatory and UMass LMT Project Director. Planetary radio astronomy; molecular cloud astrophysics; optical interferometry.

- Schneider**, Stephen E., Ph.D., Cornell, 1985. Radio astronomy; galaxies; galactic dynamics.
- Snell**, Ronald L., Ph.D., Texas, 1979. Head, UMass Department of Astronomy and Chairman, Five College Astronomy Department. Radio astronomy; molecular clouds and star formation.
- Wang**, Daniel Q., Ph.D., Columbia University, 1990. X-ray astronomy, pulsars and supernova remnants, interstellar medium, intergalactic medium, structure and evolution of galaxies and galaxy clusters.
- Weinberg**, Martin D., Ph.D., MIT, 1984. Stellar dynamics; galactic structure and evolution; globular cluster dynamics; binary star systems.
- Young**, Judith S., Ph.D., Minnesota, 1979. Radio astronomy; extragalactic astronomy; star formation; galaxy evolution.

Associate Professors

- Dyar**, Darby M., Ph.D., M.I.T, 1985. Planetary science, vis-, IR, LIBS, and Mössbauer spectroscopies.
- Giavalisco**, Mauro, Ph.D., U. Rome, Italy, 1992. Observational study of galaxy formation and evolution using space-based and ground-based facilities.
- Lowenthal**, James D., Ph.D., U. Arizona, 1991. Galaxy formation, galaxy evolution, quasar absorption line systems, high-redshift galaxies, starburst galaxies (sub)millimeter galaxies..
- Tripp**, Todd M., Ph.D., U. Wisconsin-Madison, 1997. Observational study of the evolution of galaxy and star formation in the universe.
- Wilson**, Grant W., Ph.D., Brown, 1998. Observational cosmology; cosmic microwave background, cosmic infrared background; galaxy formation and evolution; cluster formation; development of high sensitivity bolometric far-infrared receivers.
- Yun**, Min S., Ph.D. Harvard, 1992. UMass LMT Project Scientist. Observational radio astronomy; galaxy formation and evolution; ultraluminous galaxies and AGNs.

Assistant Professor

- Hameed**, Salman, Ph.D., New Mexico U., 2001. Star formation in nearby spirals; role of interactions in the evolution of spiral galaxies; astronomy and public policy; history of astronomy.

Research Faculty (all levels)

- Erickson**, Neal R., Ph.D., California, Berkeley, 1979. Development of advanced mm and sub-mm receivers; and local oscillator sources.
- Heyer**, Mark, Ph.D., Massachusetts, 1986. Molecular cloud astrophysics and star formation.
- Narayanan**, Gopal, Ph.D., Arizona, 1997. Radio astronomy; molecular clouds and star formation; development of advanced mm and sub-mm receivers.