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Massachusetts Institute of Technology

Academic Transcript

Susan Elaine Dorsher

MIT ID: 976 997 022

Birthdate: 03-JUL-1982

Admitted as a Regular Student for Fall Term 2000-2001 from TECHNICAL HIGH SCHOOL ST CLOUD, MN

Subject	Subject Name	Lv1	Cred G	irade
EALL TERM	1 2000-2001	F	RESHMAN	
3.091	Intro to Solid-State Chemistry	U.	12	Р
3.986		U	12	Р
8.01	Physics I	Ü	12	S
8.02	Physics II	U	12	P&
8.022	Physics II	U	12	P
12,000	Solving Complex Problems	U	9	Р
18.01	Calculus	U,	12	S
18.02	Calculus	U	12	S
18.03	Differential Equations	U.	12	S
18.700	Linear Algebra	U	12	P
SP.211	ESG:Experimental St Grp	U	1	P
GEN.APCR	AP Elective Credit	U	36	S
	* * *			
SPRING TE	RM 2000-2001	F	RESHMAN	
6.001	Struct & Interp:Computer Progs	U	15	P
8.03	Physics III	U	12	P
18.100B	Analysis I	U	12	Р
SP.212	ESG:Experimental St Grp	IJ	1	P
SP.293	ESG:Special Topics	U	6	P
21L.004	Major Poets	U	12	P
	* * *			
FALL TERM	1 2001-2002 COURSE: 8	S	OPHOMOR	E
8.033	Spec Relativity & Classic Mech	U	12	Α
8.04	Quantum Physics I	U	12	Α
8.224	Explor Black Hole:Gen Rel Astr	U	12	A
9.00	Introduction to Psychology	U	12	Α
SPRING TE	ERM 2001-2002 COURSE: 8	S	OPHOMOR	E
4.301	Introduction to Visual Arts	Ü	12	Α
8.044	Statistical Physics I	Ü	12	Α
8.286	The Early Universe	U	12	Α
8.URN	Undergraduate Research	U	1	URN
18.04	Complex Variables with Appl	U	12	В
	* * *			
FALL TERM	1 2002-2003 COURSE: 8	J	UNIOR	
7.012	Introductory Biology	U	12	Α
8.05	Quantum Physics II	U	12	A
8.13	Experimental Physics I	U	18	В
	* * *			

	Continued	in	Next	CoTumn	
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Subject	Subject Name	Lv1	Cred (Grade
	ERM 2002-2003 COURSE: 8		UNIOR	
4.367	Studio Seminar in Public Art	U	12	A
	Quantum Physics III	U	12	В
8.14	Experimental Physics II	U	18	C
8.URN	Undergraduate Research * * *	U	1	URN
FALL TER	4 2003-2004 COURSE: 8	S	ENIOR	
4.101	Experienc Architectural Design	U	12	Р
4,605	Intro to Hist & Theory of Arch	U	12	A
8.07	Electromagnetism II	U	12	В
	Practical Electronics	U	6	A
0	* * *			
SPRING T	ERM 2003-2004 COURSE: 8	S	ENIOR	
4.322	Introduction to Sculpture	U	12	В
	General Relativity	U	12	В
	Thesis	U	12	A
	Gender, Sexuality, & Society	U	12	Ā
-21111-02	* * *	-		
****	*******	******	*****	*****
04-JUN-20	Physics			
	*******			*****
	duate Cumulative GPA: 4.6 (on a			
******	********	****	****	*****
	END OF RECORD			
	No Entries Valid Below This L	ine		
OFFICE	AL TRANSCRIPT:	ISSUED	21-JAN	-2013
	#: AVON:2199417		ige I	
01 001	Mary 117 - Artist Mary Control of Control		.,-	

Issued to

Susan Dorsher

Mary R. Callahan, Negistra: Mary R. Callahan

Authentication of Transcript

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Academic Terms, Student Classification, and Courses

MIT's academic calendar has fifteen-week Fall and Spring Terms including exams, a ten-week Summer Term, and a four-week January Term.

Classification: Undergraduate students (Freshman, Sophomore, Junior, Senior) and Graduate students are matriculated in MIT degree programs; Special students, Exchange students, and Cross-registered students are not. Non-resident graduate students are working on doctoral thesis away from MIT.

Course: The student's Course (degree program) begins with a department or program code as listed below, followed by an option within the department. Undergraduate program options can indicate specialty area. Option codes used in graduate programs starting in Fall 1994 include: M, P, or A, Master's; D, Doctoral; CT, Transportation; RE, Real Estate Development; W, Joint with Woods Hole Oceanographic Institution. Freshmen are not permitted to register in a department. Transfer students generally enter as Sophomores.

Subject, Level, and Credit

Subject: Consists of a department or program code (see list below) followed by a period and a number. Level (LvI): Subjects included in undergraduate cumulative record: U. Subjects included in graduate cumulative record: subject approved for (higher) graduate degree credit: H; other subject accepted for graduate degree credit: N. Credit: A credit unit represents one hour of class (lecture/recitation), laboratory/design/fieldwork, or preparation per week for fourteen weeks. Three MIT credit units = one Semester Hour.

Explanation of Grades since 1980

- A Exceptionally good performance, demonstrating a superior understanding of the subject matter, a foundation of extensive knowledge, and a skillful use of concepts and/or materials.
- B Good performance, demonstrating capacity to use the appropriate concepts, a good understanding of the subject matter, and an ability to handle the problems and materials encountered in the subject.
- C Adequate performance, demonstrating an adequate understanding of the subject matter, an ability to handle relatively simple problems, and adequate preparation for moving on to more advanced work in the field.
- Minimally acceptable performance, demonstrating at least partial familiarity with the subject matter and some capacity to deal with relatively simple problems, but also demonstrating deficiencies serious enough to make it inadvisable to proceed further in the field without additional work.
- F Failed.
- J,U J Satisfactory progress that term. U Progress not satisfactory that term. Final grade in same subject in a later term also covers this term (e.g., J/B or U/A).
- Prior to Fall 1990: reflects performance at any of the levels A, B, C, or D. Fall 1990 through Summer 1992: for first-year undergraduates reflects performance at any of the levels A, B, or C; for other than freshmen reflects performance at any of the levels A, B, C, or D. Fall 1992 and after: reflects performance at any of the levels A, B, or C, with students graded on a P/D/F basis.
- Incomplete. When work completed, final grade follows I (e.g., I/B).
 Absent from the final examination, did not turn in the final paper or project, and/or was absent during the last two weeks of the term.
 Equivalent to a grade of F.
- OX Absence satisfactorily explained and excused. When work is completed final grade replaces the OX.
- SA Satisfactorily completed doctoral thesis.

 S Credit awarded for work done elsewhere.
- URN Subject in Undergraduate Research Opportunities Program taken for pay or as a volunteer rather than academic credit (the one unit shown does not count for degree credit).
- VIS Research subject taken as a non-degree visiting student.
- Grade ending in & indicates Advanced Standing Exam (not included in GPA)
- # Grade ending in # indicates ROTC (not included in degree credit; not included in GPA after Summer 1994).
- MG Indicates grade not submitted by instructor.

 IP Indicates subject "in progress" in current term.
- PE Reflects performance at any of the levels A, B, or C, under an emergency closure.
- IE Incomplete. Indicates a portion of the subject requirements has not been fulfilled, due to a major disruption of academic activities. When work completed, final grade follows (e.g., IE/B).

Freshman Grading

Prior to Fall 1990: Freshmen graded on P/F basis with F grade not recorded on transcript. Fall 1990 to Summer 2002: Freshmen graded on P/D/F basis with non passing D and F grades not recorded on transcript. Fall 2002 and after: Freshmen graded in their second semester on A/B/C/D/F basis with non-passing D and F grades not recorded on transcript.

Cumulative Grade Point Averages

Calculated on a 5.0 scale with A = 5, B = 4, C = 3, D = 2, F and O = 0, P, PE, SA, S, URN, MG, and IP, as well as non-passing grades in Freshman year, not included in GPA. J, U, I, IE, and OX grades not included in GPA until completed. Undergraduate Cumulative GPA includes subjects at Level U and Graduate Cumulative GPA includes subjects at Level H, G, and N, and up to a maximum of 24 units of thesis.

Department and Program Codes since 1980

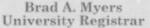
- Civil and Environmental Engineering (Civil Engineering prior to Fall 1992)
- 2 Mechanical Engineering
- 3 Materials Science and Engineering
- 4 Architecture
- 5 Chemistry
- 6 Electrical Engineering and Computer Science
- 7 Biology
- 8 Physics
- 9 Brain and Cognitive Sciences (Psychology prior to Fall 1986)
- 10 Chemical Engineering
- 11 Urban Studies and Planning
- 12 Earth, Atmospheric, and Planetary Sciences (Earth and Planetary Sciences prior to Fall 1984)
- 13 Ocean Engineering (through Spring 2007)
- 14 Economics
- 15 Management
- 16 Aeronautics and Astronautics
- 17 Political Science
- 18 Mathematics
- 19 Meteorology and Physical Oceanography (through Summer 1983)
 - (Meteorology through Summer 1980)
- 20 Biological Engineering (from Fall 2006) (Applied Biological Sciences through Summer 2003) (Nutrition and Food Science prior to Fall 1985)
- 21 Humanities
- 21A Anthropology (Anthropology/Archaeology from Summer 1989 through Summer 1996)
- 21F Foreign Languages and Literatures (from Summer 1989) 21H History (from Summer 1989)
- 21L Literature (from Summer 1989)
- 21M Music and Theater Arts (from Summer 1989)
- 21W Writing and Humanistic Studies (Writing from Summer 1989 through Summer 1991)
- 22 Nuclear Science and Engineering (Nuclear Engineering through
- Spring 2005)
- 24 Linguistics and Philosophy
- 25 Interdisciplinary Science (to Spring 1983)
- BE Biological Engineering (through Summer 2006) (BEH Bioengineering and Environmental Health from Fall 1998 through Summer 2002; TOX Toxicology from Spring 1989 through Summer 1998)
- CDO Computation for Design and Optimization (from Fall 2005)
- CMS Comparative Media Studies (from Fall 1999)
- CSB Computational and Systems Biology (from Fall 2004)
- ESD Engineering Systems Division (from Summer 1999) HPM Health Policy and Management (1983-1990)
- HST Harvard-MIT Division of Health Sciences and Technology
- MAS Media Arts and Sciences (from Spring 1993)
- OR Operations Research
- PEP Professional Education Programs (ASP Advanced Study Program through Summer 2006; CAES Center for Advanced Educational
 - Services from Spring 1996 through Summer 2003; EN Center for Advanced Engineering Study prior to 1995)
- RED Real Estate Development (from Fall 2008)
- SDM System Design and Management (from Summer 1997)
- STS Science, Technology, and Society (from Fall 1980)
- TPP Technology and Policy Program
 - Undesignated Sophomore (not yet declared Course)

Used for subjects only: SEM Undergraduate Seminar, CTS Center for Transportation Studies; SP Special Programs; AS/MS/NS ROTC; SRE Division for Study and Research in Education; EC Edgerton Center; WGS Women's & Gender Studies. Subjects taken under a Cross-registration arrangement begin with the following school codes: BU Boston U; HA Harvard U; MC Mass College of Art and Design; SM School of Museum of Fine Arts; TU Tufts U; W Wellesley College.

Privacy

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Name : Susan E. Dorsher Student ID: 04140900 Birth MO/DAY: 07/03/**** Print Date: 1/21/2013 Page I of 1

STUOF-ISSUED TO STUDENT

SUSAN DORSHER 3152 BLACKHEATH DR SAINT CLOUD, MN 56301-9602

---- Institutions Attended -----Mass Inst of Tech

2004-06-01 Bachelor Of Science

Saint Cloud State Univ U of Minn Twin Cities

SCRI

E OHIO STAT

---- 035 Degrees -----

Degree : Master of Science Confer Date | 2006-08-27 : Astronomy

---- Beginning of Graduate Record -----

Autumn 2004 Quarter

Program : Graduate Math & Physical Sci. Plan : Astronomy Major Course Description Attempted Earned Grade Points Individual Studies 3.00 3.00 S ASTRON 801 Seminar 1 2.00 2.00 S ASTRON 810 Ordr Mag Astrophy 2.00 2.00 S ASTRON 823 Astrophys Spectros 3.00 3.00 A- 11.100 Obs Prop Star&Galx 5.00 5.00 A- 18.500 ASTRON 830 TERM GPA : 3,780 TERM TOTALS : 15.00 15.00 29.600 CUM GPA : 3,700 CUM TOTALS : 15.00 15.00 29.600

Winter 2005 Quarter

Program : Graduate Math & Physical Sci.

Plan	: Astronom	ny Major			
Course		Description	Attempted	Earned Grade	Points
ASTRON	693	Individual Studies	3.00	3.00 S	
ASTRON	802	Seminar 2	2.00	2.00 \$	
ASTRON	810	Ordr Mag Astrophy	2.00	2.00 S	
ASTRON	825	Radiativ Gas Dynam	2.00	3.00 A	12,000
ASTRON	869	Obs Cosmo&Act Galx	3.00	3.00 A	12.000
PHYSICS	880.20	Special Topics	3.00	3.00 A	12.000
TERM GPA	4,000	TERM TOTALS :	16.00	16.00	36.000
CUM GPA	3,850	CUM TOTALS :	31.00	31.00	65.600
		Spring 2	005 Quarter		

Program : Graduate Math & Physical Sci.

Plan : Astronomy Major

Course		Desc	cription		Attempted	Earned G	rade	Points
ASTRON	803	Sen	inar 3		2.00	2.00	s	
ASTRON	871	Int	erstell	Medium	3.00	3.00	A	12.000
ASTRON	999	Res	earch		10.00	10.00	S	
TERM GPA	1	4.000	TERM	TOTALS :	15.00	15.00		12.000
CUM GPA	4	3.880	CUM	TOTALS :	46.00	46.00		77.600

Summer 2005 Quarter

Program : Graduate Math & Physical Sci.

Plan : Astronomy Major

Course		Des	cription		A	ttempted	Earned G	rade	Points	
ASTRON	999	Res	search			15.00	15.00	s		
TERM GR	A I	0.000	TERM	TOTALS	1	15.00	15.00		0.000	
CUM GF	7h 1	3.880	CUM	TOTALS	1	61.00	61.00		77.600	

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Autumn 2005 Quarter Program : Graduate Math & Physical Sci.

Plan	: Astrono	my Major			
Course		Description	Attempted	Earned Grad	e Points
ASTRON	693	Individual Studies	5.00	5.00 \$	
ASTRON	801	Seminar 1	2.00	2.00 S	
ASTRON	810	Ordr Mag Astrophy	2,00	2.00 S	
ASTRON	822	Electromag Radiatn	3.00	3.00 A	12.000
PHYSICS	880.20	Special Topics	3.00	3.00 A	12.000
TERM CPA	4.000	TERM TOTALS	15.00	15.00	24.000
cene cons	3 0.00	CIM TOTALS	26 00	76.00	101 655

Winter 2006 Quarter

Program : Graduate Math & Physical Sci.

Plan	: Astronom	my Major			
Course		Description	Attempted	Earned Grade	Points
ASTRON	693	Individual Studies	3.00	0.00 U	
ASTRON	802	Seminar 2	2.00	2.00 S	
ASTRON	810	Ordr Mag Astrophy	2.00	2.00 8	
ASTRON	831	Stellar Interiors	3,00	3.00 B	9.000
ASTRON	870	Stellar Systems	3.00	3.00 A-	11.100
PHYSICS	880.20	Special Topics	3,00	3.00 A-	11.100
TERM GPA	3.466	TERM TOTALS :	16,00	13.00	31.200
CUM GPA	: 3.794	CUM TOTALS :	92.00	89.00	132.800
		Spring 2	006 Quarter		

Program : Graduate Math & Physical Sci.

: Astronomy Major

Course		E	Description		Attempted	Earned (Grade	Points
ASTRON	693		Individual Stu	dies	10.00	10.00	s	
ASTRON	803		Seminar 3		2.00	2.00	s	
ASTRON	873		Cosmol&Struc F	ormn	3.00	3.00	A	12.000
TERM GPA	1	4,000	TERM TOT	ALS :	15.00	15.00		12,000
CUM GPA	9	3.810	CUM TOT	ALS :	107.00	104.00		144.800
Graduate	Caree	r Total:						
CUM GPA		3.810	CUM TOTAL	S i	107.00	104.00		144.800

---- End of Transcript -----

Date of Issue: 11/21/2013 Page: 1 of 1 Student Campus 10: 00275893 Student Number: 384076 Graduate Academic Record

Credit Credit Grade Course

GPA

Title

GPA

GPA Credit

Credit

Grade

Course

**** St. Cloud State University ****

Title

Subj Nbr

Subj Nbr

.00 1.00 4.00 .00 1.00 4.00 8.00 GPA: 4.00 20.00 GPA: 4.00

9.8

Intro to Fractional Calcu 1.00 A 1.0 A 1.0 A 1.0 A 1.0 A 1.0 Earn: 2.00 GPA Crs: 2.00 GPA Pts: 5.00 Earn: 5.00 GPA Crs: 5.00 GPA Pts:

Summer 2013 PHYS 550 PHYS 551

GRAD Term Att: **** Cum Att: 20.00 GPA: 4.00 20.00 GPA: 4.00

5.00 GPA Pts: 5.00 GPA Pts:

Career Graduate Summary - Semester Hours Local: Att: 5.00 Earn: 5.00 GPA Crs: Total: Att: 5.00 Earn: 5.00 GPA Crs:

* * * END OF ACADEMIC TRANSCRIPT * * *

.00 3.00 12.00 12.00 GPA: 4.00 12.00 GPA: 4.00

STAT 517 Applied Prob/Simulation 3.00 A 3.0 GPA Pts: 3.00 Earn: 3.00 GPA Crs: 3.00 GPA Pts: **** Cum Att: 3.00 Earn: 3.00 GPA Crs: 3.00 GPA Pts:

Graduate Special

Fall 2012

3.00

SSN: xxx-xx-6437

Name: Dorsher, Susan Elaine

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Undergraduate Academic Record Date of Issue: 11/21/2013 Page: 1 of 1 Student Campus ID: 00275893 Student Number: 384076

GPA Earned Credit Credit Grade Credit

GPA

Title

Sub Nor

GPA

Credit

Earned Credit

Grade

Credit

SSN: xxx-xx-6437

Name: Dorsher, Susan Elaine

Special

PSY

UNDG Term Att:

Concepts Stars/Universe 3.00 A 3.00 3.00 12.00 Human Learning/Memory 3.00 W 0.00 0.00 0.00 6.00 Earn: 3.00 GPA Crs: 3.00 GPA Pts: 12.00 GPA: 4.00 6.00 Earn: 3.00 GPA Crs: 3.00 GPA Pts: 12.00 GPA: 4.00

00 5.00 20.00 00 3.00 12.00 32.00 GPA: 4.00 68.00 GPA: 4.00

Classical Physics II 5.00 A 3.0 Intermed French II 3.00 A 3.0 8.00 Earn: 8.00 GPA Crs: 8.00 GPA Pts: 25.00 Earn: 17.00 GPA Crs: 17.00 GPA Pts:

PHYS 235 FREN 202

Spring 2000

UNDG Term Att:

Summer 2012

3.00

Graduate Special
Graduate Special
Graduate Special
Graduate Special
GSC1 262 Prgramming in Java 2.00 A 2.00 2.00 8.00
MNDG Term Att: 2.00 Earn: 2.00 GPA Crs: 2.00 GPA Pts: 8.00 GPA: 4.00
**** Cum Att: 27.00 Earn: 19.00 GPA Crs: 19.00 GPA Pts: 76.00 GPA: 4.00

UNDG Term Att:

ASTR 323

Fall 2012

MATH 461

www. Cum Att:

Observational Astronomy 3.00 A+ 3.00 3.00 12.00 Modern Algebra 1 4.00 A 4.00 4.00 6.00 16.00 7.00 Earn: 7.00 GPA Crs: 7.00 GPA Pts: 28.00 GPA: 4.00 34.00 Earn: 26.00 GPA Crs: 26.00 GPA Pts: 104.00 GPA: 4.00

3.00 3.00 12.00 2.00 2.00 8.00 GPA Pts: 20.00 GPA: 4.00 GPA Pts: 124.00 GPA: 4.00

Digital Logic Design 3.00 A+ Lie Groups/Rings/Other 2.00 A 5.00 Earn: 5.00 GPA Crs: 5.00 39.00 Earn: 31.00 GPA Crs: 31.00

ECE 221 MATH 499

Spring 2013

**** Cum Att:

UNDG Term Att:

124.00 GPA: 4.00 124.00 GPA: 4.00

39.00 Earn: 31.00 GPA Crs: 31.00 GPA Pts: 39.00 Earn: 31.00 GPA Crs: 31.00 GPA Pts:

Career Undergrad Summary - Semester Hours

Local: Att: Total: Att:

* * * END OF ACADEMIC TRANSCRIPT * * *

00 3.00 12.00 00 3.00 12.00 00 0.00 0.00 24.00 GPA: 4.00 36.00 GPA: 4.00

3.00 A 3.00 3.00 A 3.00 5.00 W 0.00 rs: 6.00 GPA Pts:

Solar System Astronomy Classical Physics I

Intermed French I

FREN 201 ASTR 311

Fall 1999

PHYS 234

6.00 GPA Crs: 9.00 GPA Crs:

11.00 Earn: 17.00 Earn:

Term Att: Cum Att:

50ND

33.0

ASTR 107

Spring 1999

Subi Nbr Title

**** St. Cloud State University

UNIVERSITY OF MINNESOTA OFFICE OF THE REGISTRAR

TRANSCRIPT RECORD

University of Minnesota Official Transcript

Page No. 1

ame : Dorsher, Susan Elaino

Student ID: 1823199 Birthdate: 07-03

Print De	ste : 11	-19-2013								Fall Quarter	1000		
worm ner	ENT PROCES	MO							University of	f Minnesota, Tw			
Compan			(innesota, Twin (rition.					University Co		III CICICO		
Program		niversity Coll							Non Degree No				
Plan		on Degree Mon-	- /- ·				Course		Description	an Dograd	Attempted	Barned Grade	Points
Student	also has t	ranscripts fro	on the University	y of Minnesot	ta at levels:		натн	5900	Tutorial:Adv	Math	4.00	4.00 B+	13.332
Graduate	•	100	Par					TERM GPA	3.333	TERM TOTALS	: 4.00	4.00	13.332
			Transfer Cred	its						Winter Quarter	1999		
									University of	f Minnesota, Tw			
Transfer	Credit fr	om CR BY ADV F	PLCMT-COL BOARD						University Co	ollege			
P. BOULE	Semester	Credits Trans	ferred + 30	0.00					Non Degree No	on-Degree			
							Course		Description		Attempted	<u>Earned Grade</u>	Points
							мати	5900	Tutorial:Adv	Math	4.00	4.00 A	16.000
		Beginn	ning of Undergrae	duste Record				TERM GPA :	4.000	TERM TOTALS	: 4.00	4.00	16,000
			Fall Quarter	1996				Effective Fa	all 1999 the Ur	niversity of Mi	nnesota con	verted to semest	ers
		University o	of Minnesota, Tw	in Cities									
		University C	college							Fall Semester	1999		
		Non Degree N	Ion-Degree							f Minnesota, Tw	in Cities		
Course		Description		Attempted	<u> Karned</u> <u>Grade</u>	Points			University Co				
									Non Degree No	on-Degree			
матн	17118	Honors Calcu	lus I	4.00	4.00 A	16.000	Course		Description		Attempted	Earned Grade	Points
	TERM GPA	4.000	TERM TOTALS	4.00	4.00	16.000	MATH	2473	Calculus III		5.00	5.00 A	20.000
			Spring Quarter					TERM GPA	4.000	TERM TOTALS	: 5.00	5.00	20.000
			of Minnesota, TV	in Cities					12.0				
		University C							University o	of Minnesota Su	mmary Inform	mation	
		Non Degree N	lon-Degree	Attempted	Barned Grade	Points	Dadaman	aduate Caree	w Watale				
Course		Description		Attempted	Earned Grade	Polats	undergr	aduate Caree	er rotars				
MATH	17218	Honors Calcu	alus II	4.00	4.00 A	16.000					Attempted	Earned	Points
								CUM CPA :		CUM TOTALS	1 21.67	21.67	84.899
	TERM GPA	: 4.000	TERM TOTALS :	4.00	4.00	16.000		GPA UNITES	21.670	син	TOTALS :	51.67	
			Pall Quarter										
			of Minnesota, Tw	in Cities									
		University C											
		Non Degree N	lon-Degree	1000.001	2 10 10 10 10	200000			nscript *****				
Course		Description		Attempted	Earned Grade	Points	Page	1 of 1					
нати	17318	Honors Calcu	alus 3	4.00	4.00 A	16.000							
	TERM GPA	4.000	TERM TOTALS :	4.00	4.00	16.000							
			Winter Quarter	1998									
		University o	of Minnesota, Twi	in Cities									
		University C											
		Non Degree N	lon-Degree										
Course		Description		Attempted	Earned Grade	Points							
нати	3511B	Hon:Linear A	Analy I	5.00	5.00 A	20.000							
	TERM GPA	: 4.000	TERM TOTALS	5.00	5.00	20.000							

Susan Dorsher

Susan Van Voorhis, Registrar University of Minnesota, Twin Cities

University of Minnesota office of the registrar

TRANSCRIPT RECORD

University of Minnesota Official Transcript

Page No. 1

Name : Dorsher, Susan Elaine

Student ID: 1823199 Birthdate: 07-03

Print De	ate 11	-19-2013									
								Spring Semest			
MOST REC	ENT PROCES	MS						University of Minnesota,	Twin Cities		
Compus	: 0	niversity of Minnesota, Twis	Cities					Graduate School			
Program	: 0	ollege of Sci & Engineering						Physics Ph D Major			
Plan	: P	hysics M S Major				Course		Description	Attempted	Earned Grade	Points
Degree 2		aster of Science									
Advisor	1 16	apusta,Joseph I				PHYS	5012	Classical Phys II	4.00	4.00 A	16.000
						PHYS	8011	Quant Field Thy I	3.00	3.00 A-	11.001
Student	also has t	ranscripts from the Univers	ity of Minneso	ta at levels:		PHYS	8900	Elem Particle Sem	1.00	1.00 S	
Undergra	duate					PHYS	8902	Elem Part Phys II		0.00 W	
		The same of					TERN GPA	: 3.857 TERM TOTAL	s: 8.00	8.00	27.001
	Uni	versity of Minnesota Degrees	and Certific	ates Awarded -				Fall Semeste	r 2008		
Degree		: Master of Science						University of Minnesota,			
Confer I	ate	1 07-31-2013						Graduate School			
Acad Pro		: College of Sci & Engine	aring					Physics Ph D Major			
Plan	-green	Physics N S	Married De			Course		Description	Attempted	Barned Grade	Points
								SECTION SECTIO	- September 1	ECONOCIO MA	1000
						PHYS	5041	Nath Moth Phys	4.00	4.00 A	16.000
	-	Beginning of Gree	duste Record			PHYS	5201	Thermal and Stat Phys	3.00	3.00 B	9.000
						PHYS	8012	Quant Field Thy II	3.00	3.00 A	12.000
		Fall Semeste:									
		University of Minnesota,	Twin Cities				TERM CPA	: 3.700 TERM TOTAL	8 : 10.00	10.00	37.000
		Graduate School									
		Physics Ph D Major						Spring Semest			
Course		Description	Attempted	Earned Grade	Points			University of Minnesota,	Twin Cities		
								Graduate School			
PHYS	5001	Quantum Mech I	4.00	4.00 A	16-000			Physics Ph D Major			
PHYS	5011	Classical Phys I	4.00	4.00 B+	13.332			Supporting Program Minor			
PHYS	5072	Best Practices in Phys Ter		1.00 S		Course		Description	Attempted	Earned Grade	Points
PHYS	5980	Research Seminar	1.00	1.00 S		Target Co.	F00.4	W		2.00 -	
	-			10.00	20 222	PHYS	5994	Directed Research	3.00	3.00 S	
	TERM CPA	1 3.667 TERM TOTALS	5 : 10.00	10.00	29.332	PHYS	8200 8501	Cos/Bigh En Astro Seminar Gen Rel Cosmol I	3.00	1.00 S 3.00 A	12.000
		Spring Semeste	ex 2007			1110	0042	THE PERSON I	3.00		
		University of Minnesota, 1					TERM CPA	4.000 TERM TOTAL	S: 7.00	7.00	12.000
		Graduate School						The same sound			
		Physics Ph D Major						Fall Semeste	x 2009		
Course		Description	Attempted	Barned Grade	Points			University of Minnesota,			
-								Graduate School			
PHYS	4511	Intro Nuc and Part Phys	3.00	3.00 A	12.000			Physics Ph D Najor			
PHYS	5002	Quantum Nech II	4.00	4.00 B+	13.332			Supporting Program Minor			
PHYS	5012	Classical Phys II		0.00 W		Course		Description	Attempted	Earned Grade	Points
								7 100			
	THEN GPA	: 3.619 TERM TOTALS	5: 7.00	7.00	25.332	PHYS	8200	Cos/High En Astro Seminar		1.00 5	V 22 (2 may)
						PHYS	8502	Gen Rel Counci II	3.00	3.00 B	9.000
		Fall Semester				PHYS	8883	Theeis Credit:Doct*	10.00	10.00 NG	
		University of Minnesota, 1	rwin Cities				manus and	2 000		11.00	
		Graduate School					TERM GPA	3.000 TERM TOTAL	8 1 14.00	14.00	9.000
Annes		Physics Ph D Major	Attorne	Parned ford	Boiner				2010		
Course		Description	Attempted	Earned Grade	Points			Spring Semest			
nune	4363	Clas Chara Mana	2.00	3.00 *	12.000			University of Minnesota,	Twin Cities		
PHYS	4201 8001	Stat Therm Phys Adv Quant Mech	3.00	3.00 A 3.00 B*	9.999			Graduate School Physics Ph D Major			
	8900	Elem Particle Sem			3.999						
PHYS	8900	Elem Particle Sem Elem Part Phys I	1.00 3.00	1.00 S 3.00 B+	9.999	Course		Supporting Program Minor Description	Attempted	Earned Grade	Points
									and the same of th		
	TERM GPA	: 3.555 TERM TOTALS	: 10.00	10.00	31.998	PHYS	8888	Thesis Credit:Doct*	14.00	14.00 NG	

Susan Dorsher

University of Minnesota office of the registrar

TRANSCRIPT RECORD

University of Minnesota Official Transcript

: Dorsher, Susan Blaine

Student ID: 1823199 Birthdate: 07-03

0.000 TERM TOTALS : 14.00 14.00 TERM CPA :

Summer Semester 2010

0.000

Graduate Career Totals

University of Minnesota, Twin Cities

Graduate School Physics Ph D Major

CUM GPA: 3.652 GPA UNITS : 47.000

Attempted Earned CUM TOTALS: 83.00 83.00

Course

PRYS

Supporting Program Minor Description

Attempted Earned Grade Points

CUM TOTALS : 83.00

Points

171.663

PTE: Doctoral

1.00 1.00 NG

***** End of Transcript *****

2444

1.00

0.000

Page 2 of 2

Fall Semester 2010

TERM TOTALS :

University of Minnesota, Twin Cities

Graduate School Physics Ph D Major Supporting Program Minor

Course

Description

Attempted Barned Grade Points

1.00

PHYS 8444 PTE: Doctoral TERM GPA :

1.00

1.00 MG

0.000 TERM TOTALS : 1.00 1.00

0.000

Spring Semester 2011

University of Minnesota, Twin Cities

Graduate School Physics Ph D Major

Course

Supporting Program Minor Description

TERM GPA : 0.000 TERM TOTALS : 1.00

Attempted Earned Grade Points

1.00

PHYS

PTE: Doctoral

0.000

Summer Semester 2011

University of Minnesota, Twin Cities

Graduate School Physics Ph D Major Supporting Program Minor

Cancelled

Fall Semester 2011

University of Minnesota, Twin Cities College of Sci & Engineering Physics Ph D Major

Cancelled

Course

Summer Semester 2013

University of Minnesota, Twin Cities

College of Sci & Engineering Physics M S Major

Supporting Program Minor

Description

Attempted Earned Grade Points

Graduate School Active Status

0.00 NG

TERM CPA :

0.000 TERM TOTALS : 0.00

0.00

0.000

University of Minnesota Summary Information

Susan Van Voorhis, Registrar University of Minnesota, Twin Cities

Franscript key

these exceptions: Law school started on semesters Fall 1981, and some campuses. Prior to Fall 1999 the University used a quarter system with The semester system started Fall 1999 for all University of Minnesota College of Continuing Education courses were taught on a semester calendar but the credits reported as quarter credits.

Accreditation

Commission of the North Central Association of Colleges and Schools. The University of Minnesota is accredited by the Higher Learning

Course (class) numbering system (from Fall 1999)

00000 to 0999 remedial courses

primarily for undergraduates in first year 1000 to 1999

primarily for undergraduates in second year 2000 to 2999

primarily for undergraduates in third year 3000 to 3999

primarily for undergraduates in fourth year, may be applied to a Graduate School degree with approval by the student's major field and if taught by a member of the graduate faculty or an individual 4000 to 4999

0000 to 5999 primarily for graduate students but third and fourth year authorized by the program to teach at the graduate level

5000 to 7999 for postbaccalaureate professional degree students for graduate students undergraduates may enroll 8000 to 9999

Prior course numbering systems

For Fall 1970 through Summer 1999 (course numbering prior to 1970 is

noted in parentheses):

noncredit courses 0000 10 0099

1000 to 1999

(01 - 49) introductory courses primarily for freshmen and sophomores

000 to 3999 (50 - 99) intermediate courses primarily for juniors and

5000 to \$999 (100 - 199) advanced courses for juniors, seniors, and graduate students

5000 to 8999 (200 and higher) for graduate and professional school

students

Starting Fall 1999 - units are semester credit

Prior to Fall 1999 - units generally are quarter credit (see calendar for

Continuing Education (Continuing Education and Extension prior to Fall Thesis credit - an asterisk (*) will appear following the course title of courses numbered 8777, 8888, or 8999 if the degree award is shown An asterisk (*) indicates graduate credit taken though College of

Grading policy (complete)

Available online at policy.umn.edu/Policies/Education/Education/ GRADENGTRANSCRIPTS.html

Campus records office locations:

University of Minnesota, Duluth Duluth; MN 55812-3011 218-726-8000 University of Mannesota, Crookston Dept of Educ Inst od 004969 Crookston, MN 56716-5001 218-281-8548 PERMITTEEN

University of Minnesota, Morris Dept of Educ Inst ed: 002389 Morris, MN 56267-2132 212 Behander Hall 329-589-6030 184 Darland Administration Building Dept of Educ Inst ed: 002388

to St. Paul, MN 55108 130 Coffee Hall 6 Dept of Educ Inst ed: 003969 Minneapolis, MN 55455 333 Science Teaching & Shadent Services 612-624-1111

Winneapolis, MN 55455 130 West Bank Skyway 612-624-1111 University of Minnesota, Twan Cities

The University of Minnesota, Wastea empts closed in 1902. For information on Wastea student transcripts, contact the St. Paul office transcripts, contact the St. Paul office.

ACTHENTITY TEST. When photocopied, a bitml security statement containing the institutional name and the world COPY COPY COPY COPY Will agree on the face of the estine document. An authente document will stem if touched by fresh liquid bloach. A black and white or color copy of this document is not an original and should not be accepted as an official institutional document. ALTERATION OF THIS DOCUMENT MAY BE A CRIMINAL OFFENSE.

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Grading definitions

- achievement that is outstanding relative to the level necessary to meet course requirements
- achievement that is significantly above the level necessary to meet
- Fall 2004, the Twin Cities campus Law School uses University standard grading, with the addition of A+ = 4.333 and excluding D+. achievement that meets the course requirements in every respect
 - achievement that is worthy of credit even though it fails to meet fully the course requirements å
- meet the basic course requirements but not judged to be outstanding F (or N) - represents failure (or no credit) and signifies that the work was achievement that is significantly greater than the level required to Щ
 - either (1) completed but at a level of achievement that is not worthy between the instructor and the student that the student would be of credit or (2) was not completed and there was no agreement awarded an I (see also I)
- (Honors) used by Law School and Medical School only ÷
- prevented from completing the work of the course on time. Requires (Incomplete) assigned at the discretion of the instructor when, due to extraordinary circumstances, e.g., hospitalization, a student is a written agreement between instructor and student
 - assigned by an instructor to indicate the course is still in progress and that a grade cannot be assigned at the present time ż

no grade required 2

- represents outstanding achievement for Doctor of Medicine and Doctor of Veterinary Medicine programs ò
 - achievement designating passing work
 - achievement designating passing work
- achievement that is satisfactory, which is equivalent to a C- or better a course related registration symbol 9 × 9
 - Graduate and professional programs may establish higher standards for undergraduate students (C or better on the Duluth campus). for carning a grade of S.
- registration as an auditor or visitor (a non-grade non-credit registration)
- entered by the registrar's office when the student officially withdraws from a course after the second week ż
- the grade cannot be determined until the sequence is complete the reported by the instructor for a student in a sequence course where instructor is to submit a grade for each X when the sequence is
- assigned from Fall 1929 to Summer 1959 to indicate the student canceled while doing passing work
- assigned from Fall 1929 to Summer 1959 to indicate the student canceled while doing failing work

on the Morris campus from Fall 1972 through Summer 1985, the official On the Twin Cities campus from Fall 1972 through Summer 1977 and University transcript included only positive academic achievements. Courses in which the student received a grade of N or a registration symbol of I or W did not appear on the transcript.

Grade/Numeric Point Average formula

B+ = 3,333, B = 3,000, B- = 2,667, C+ = 2,333, C = 2,000, C- = 1,667, D+ = 1.333, D = 1.000, F = 0.000, I = 0.000, K = 0.000, X = 0.000. Effective Effective Fall 1997, grade point values were standardized for the University. All units except Law use: A = 4,000, A- = 3,667,

A-=3,6, B=3,2, B-=2,8, C+=2,4, C=2,0, C-=1,6, D=1,2, D-=0,8. Before 1997, most units did not use +/-. But the Duluth campus and the B = 3.0, B - = 2.6, C + = 2.3, C = 2.0, C - = 1.6, D + = 1.3, D = 1.0, F = 0.0 and the Twin Cities General College used A = 4.0, School of Management used: A = 4.0, A - = 3.6, B+ = 3.3,

program. Grades ranged from 4-16 points based on the following: 14-16: Prior to Fall 2004, the Twin Cities campus Law School used a numeric Excellent/Outstanding; 11-13: Substantially better than average; 8-10; rather than a grade point average for the juris doctor (J.D.) degree

completion, and NPA); 4: Failing; 0: Non-performance. Classes for which a 0 grade was earned are not included in NPA calculation. Grades earned in the LL.M. (Master of Laws) program were: A=4.00, B=3.00, C=2.00, Minimally acceptable; 5-7: Inadequate (credits count towards degree D=1.00, F=0.00. No +/- distinctions are given.

Symbols following course numbers

- certificate credit
- on Duluth campus, registration in Continuing Education, or on Twin Cities campus, an MBA course
- honors course for extra credit Ġ \pm
- evening MBA course for extra credit honors course
- evening MBA course by independent study 74
 - honors course by independent study
 - extra credit by independent study JX
- evening MBA extra credit by independent study òά
 - honors extra credit by independent study
 - semester registration (pre-1999) S
- special term course taken for extra credit semester honors course (pre-1999)
 - honors and writing intensive
 - writing intensive \geq

 - extra credit
- independent study
- special term registration

Additional notations

Canceled means that all course registration was canceled (i.e., dropped) before the end of the second week of the term. Degree with distinction indicates graduation with high GPA; degree with honors (laude) indicates completion of honors program

Second Language Proficiency means demonstrated intermediate proficiency in reading, writing, listening, and speaking.

For more information, visit www.umn.edu

University of Minnesota, Rochester Dept of Educ Inst ed: 003969 Rochester, MN 55904 111 South Broadway 507-258-8457

LOUISIANA STATE UNIVERSITY COLLEGE RECORD

	PAGE :
SUSAN ELAINE DORSHER	DEPT CRSE GR CARR EARN QPTS
ISSUED 11/21/2017 TO: STUDENT	LOUISIANA STATE UNIVERSITY 1ST SEM 2014-2015 GRAD 7 PPHYS
DEGREES AWARDED: 06/2004 BS	ASTR 7777 ASTR 7783 A 3.00 3.00 12.00 PHYS 7336 PHYS 7895 PHYS 7895 PHYS 7895 SEMESTER LSU SYSTEM 7.00 16.00 28.00 4.000 LSU SYSTEM 7.00 16.00 28.00 4.000
MASSACHUSETTS INSTITUTE OF TECHNOLOGY 08/2006 MS OHIO STATE UNIVERSITY	LOUISIANA STATE UNIVERSITY
07/2013 MS UNIVERSITY OF MINNESOTA-TWIN CITIES-MINN UNIVERSITY OF MINNESOTA-TWIN CITIES-MINN UG 1Q/1997-1S/1999 ST CLOUD STATE UNIVERSITY UG 2S/1999-2S/2000 MASSACHUSETTS INSTITUTE OF TECHNOLOGY UG 1T/2001-2T/2004 UNDERGRADUATE TOTALS	2ND SEM 2014-2015 GRAD 7 PPHYS PHYS 7225 PHYS 7411 A 3.00 3.00 12.00 PHYS 7777 A 1.00 1.00 4.00 PHYS 7777 PHYS 7857 PHYS 7895 P 3.00
HC 69.67 HE 264.00 QP 276.89 GPA 3.974 ST CLOUD STATE UNIVERSITY PB 3S/2012-2S/2013 POST BACCALAUREATE TOTALS HC 14.00 HE 14.00 QP 56.00 GPA 4.000	SEMESTER 8.00 12.00 32.00 4.000 LSU SYSTEM 15.00 28.00 60.00 4.000 CUMULATIVE 92.08 184.64 347.22 3.770
OHIO STATE UNIVERSITY UNIVERSITY OF MINNESOTA-TWIN CITIES-MINN GR 15/2007-25/2011 ST CLOUD STATE UNIVERSITY GR 15/2013-25/2013	LOUISIANA STATE UNIVERSITY 3RD SEM 2014-2015 GRAD 7 PPHYS
GRADUATE TOTALS HC 77.08 HE 156.64 QP 287.22 GPA 3.726 DEPT CRSE GR CARR EARN QPTS	PHYS 9000 S 6.00 SEMESTER 6.00 LSU SYSTEM 15.00 34.00 60.00 4.000 CUMULATIVE 92.08 190.64 347.22 3.770
LOUISIANA STATE UNIVERSITY 3RD SEM 2013-2014 GRAD 7 PPHYS	LOUISIANA STATE UNIVERSITY 1ST SEM 2015-2016 GRAD 7 PPHYS
PHYS 9000 S 6.00 SEMESTER 6.00 LSU SYSTEM 6.00	PHYS 7232 A- 3.00 3.00 11.10 PHYS 7777 A 1.00 1.00 4.00 PHYS 9000 S 6.00
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LOUISIANA STATE UNIVERSITY COLLEGE RECORD

SUSAN ELAINE DORSHER

PAGE 2

				SUSAN ELAINE DURSHER	PAGE 2
DEPT CRSE G	GR CARR EAR	N QP	PTS	DEPT CRSE GR CARR EARN Q	PTS
LOUISIANA STATE UNIVERSITY 2ND SEM 2015-2016 GRAD 7	PPHYS			LOUISIANA STATE UNIVERSITY 3RD SEM 2016-2017 GRAD 7 PPHYS	
PHYS 7777 A PHYS 7895 P PHYS 9000 S	1.00 1.00 3.00 3.00	12.00		PHYS 9000 S 6.00 SEMESTER LSU SYSTEM 25.00 84.00 99.10 CUMULATIVE 102.03 240.64 386.32	
		16.00 91.10 378.32	3.960	LOUISIANA STATE UNIVERSITY 1ST SEM 2017-2018 GRAD 7 PPHYS	×
LOUISIANA STATE UNIVERSITY 3RD SEM 2015-2016 GRAD 7	PPHYS			PHYS 7777 PHYS 9000 IP 8.00	
PHYS 9000 S	6.00			CURRENTLY ENROLLED 9.00	
	6.00 23.00 60.00 100.08 216.64	91.10 378.32		PENDING DEGREE PROGRAMS:	
LOUISIANA STATE UNIVERSITY				DEGREE SEQ NBR: 04 INACTIVE GRAD DOCTORAL PPHYS	3S/2014
1ST SEM 2016-2017 GRAD 7				DEGREE SEQ NBR: 05 GRAD NON-THESIS SPHYS	3S/2014
PHYS 7777 A PHYS 9000 S SEMESTER	1.00 1.00 8.00	4.00	4 000	APPROVED TO REC DEGREE CREDIT FOR PHYS 550, SUMMER	13 GRAD
LSU SYSTEM CUMULATIVE	\ \	95.10	3.962	ST CLOUD STATE TO BE APPLIED TOWARD SPHYS JM 11/13/	17 GRAD
LOUISIANA STATE UNIVERSITY 2ND SEM 2016-2017 GRAD 7	PPHYS			10/02/2017 PASS FINAL EXAM ************************************	SPHYS ******
РНҮS 7777 РНҮS 9000 S	1.00 1.00 8.00	4.00			
SEMESTER LSU SYSTEM CUMULATIVE	1.00 9.00 25.00 78.00 102.08 234.64	4.00 99.10 386.32	3.964		