

## DOUBLE MAJOR PROGRAMS BETWEEN PHYS AND MATH DEPARTMENTS

PHYS (Basic Phys Opt)			PHYS ("Other" Options)			PHYS-MATH (Basic Phys Opt)			PHYS-MATH ("Other" Options)			MATH-PHYS PROGRAM			MATH PROGRAM		
First Semester	Cr.	ECTS	First Semester	Cr.	ECTS	First Semester	Cr.	ECTS	First Semester	Cr.	ECTS	First Semester	Cr.	ECTS	First Semester	Cr.	ECTS
PHYS 101	4	8	PHYS 101	4	8	PHYS 101	4	8	PHYS 101	4	8	MATH 111	4	8	MATH 111	4	8
CHEM 105	4	6	CHEM 105	4	6	CHEM 105	4	6	CHEM 105	4	6	MATH 131	4	6	MATH 131	4	6
MATH 101	4	6	MATH 101	4	6	MATH 101	4	6	MATH 101	4	6	PHYS 101 **	4	8	PHYS 101 **	4	8
S. English Elect.	3	8	S. English Elect.	3	8	S. English Elect.	3	8	S. English Elect.	3	8	Unrestricted elective	3	4	Unrestricted elective	3	4
												AE 111*/HSS	3	3	AE 111*/HSS	3	3
	15	28		15	28		15	28		15	28		18	29		18	29
<b>Second semester</b>			<b>Second semester</b>			<b>Second semester</b>			<b>Second semester</b>			<b>Second semester</b>			<b>Second semester</b>		
PHYS 102	4	8	PHYS 102	4	8	PHYS 102	4	8	PHYS 102	4	8	MATH 132	4	8	MATH 132	4	8
S. Science elective	4	6	S. Science elective	4	6	S. Science elective	4	6	S. Science elective	4	6	MATH 162	4	6	MATH 162	4	6
MATH 102	4	6	MATH 102	4	6	MATH 102	4	6	MATH 102	4	6	PHYS 102	4	8	PHYS 102	4	8
S. English Elect.	3	8	S. English Elect.	3	8	S. English Elect.	3	8	S. English Elect.	3	8	CMPE 150	3	5	CMPE 150	3	5
												AE 112*/HSS	3	4	AE 112*/HSS	3	4
	15	28		15	28		15	28		15	28		18	31		18	31
<b>Third semester</b>			<b>Third semester</b>			<b>Third semester</b>			<b>Third semester</b>			<b>Third semester</b>			<b>Third semester</b>		
PHYS 201	4	6	PHYS 201	4	6	PHYS 201	4	6	PHYS 201	4	6	MATH 201	4	5	MATH 201	4	5
PHYS 221	3	5	PHYS 221	3	5	PHYS 221	3	5	PHYS 221	3	5	MATH 231	4	4	MATH 231	4	4
MATH 201	4	5	MATH 201	4	5	MATH 201	4	5	MATH 201	4	5	PHYS 201	4	6	PHYS 201	4	6
EC 101	3	5	EC 101	3	5	EC 101	3	5	EC 101	3	5	PHIL 131	3	10	PHIL 131	3	10
HSS Elect.	3	6	HSS Elect.	3	6	HSS Elect.	3	6	HSS Elect.	3	6	Unrestricted elective	3	3	Unrestricted elective	3	3
TK 221	2	3	TK 221	2	3	TK 221	2	3	TK 221	2	3	TK 221	2	3	TK 221	2	3
	19	30		19	30		19	30		19	30		20	31		20	31
<b>Fourth Semester</b>			<b>Fourth Semester</b>			<b>Fourth Semester</b>			<b>Fourth Semester</b>			<b>Fourth Semester</b>			<b>Fourth Semester</b>		
PHYS 202	4	6	PHYS 202	4	6	PHYS 202	4	6	PHYS 202	4	6	MATH 202	4	7	MATH 202	4	7
MATH 202	4	7	MATH 202	4	7	MATH 202	4	7	MATH 202	4	7	MATH 224	3	6	MATH 224	3	6
EE 210	3	6	EE 210	3	6	EE 210	3	6	EE 210	3	6	MATH 232	3	6	MATH 232	3	6
EC 102	3	4	EC 102	3	4	EC 102	3	4	EC 102	3	4	HSS	3	3	HSS	3	3
HSS Elect.	3	6	HSS Elect.	3	6	HSS Elect.	3	6	HSS Elect.	3	6	PHYS 221	3	5	Science Elect.	3	4
TK 222	2	3	TK 222	2	3	TK 222	2	3	TK 222	2	3	TK 222	2	3	TK 222	2	3
	19	32		19	32		22	38		22	38		22	36		18	29
<b>Fifth Semester</b>			<b>Fifth Semester</b>			<b>Fifth Semester</b>			<b>Fifth Semester</b>			<b>Fifth Semester</b>			<b>Fifth Semester</b>		
PHYS 301	3	6	PHYS 301	3	6	PHYS 301	3	6	PHYS 301	3	6	MATH 321	4	8	MATH 321	4	8
PHYS 311	3	7	PHYS 311	3	5	PHYS 311	3	5	PHYS 311	3	5	MATH 331	4	8	MATH 331	4	8
PHYS 325	3	5	Option Elective	3	6	PHYS 325	3	5	Option Elective	3	6	MATH 343	4	6	MATH 343	4	6
PHYS 331	3	5	Distribution Elective	3	6	PHYS 331	3	5	Distribution Elective	3	6	HSS	3	5	HSS	3	5
Unrestricted elective	3	6	Unrestricted elective	3	6	MATH 331	4	8	MATH 331	4	8	HTR 311	2	3	HTR 311	2	3
HTR 311	2	3	HTR 311	2	3	HTR 311	2	3	HTR 311	2	3	PHYS 311 (Not 2)	3	7			
	17	32		17	32		22	42		22	42		20	37		17	30
<b>Sixth Semester</b>			<b>Sixth Semester</b>			<b>Sixth Semester</b>			<b>Sixth Semester</b>			<b>Sixth Semester</b>			<b>Sixth Semester</b>		
PHYS 302	3	3	PHYS 302	3	3	PHYS 302	3	3	PHYS 302	3	3	MATH 322	4	8	MATH 322	4	8
PHYS 312	3	5	PHYS 380	3	5	PHYS 312	3	5	PHYS 380	3	5	MATH 332	4	8	MATH 332	4	8
PHYS 326	3	6	Option Elective	3	6	PHYS 326	3	6	Option Elective	3	6	MATH 336	4	6	MATH 336	4	6
PHYS 442	4	7	Distribution Elective	3	6	PHYS 442	4	7	Distribution Elective	3	6	HSS	3	5	HSS	3	5
Unrestricted elective	3	6	Unrestricted elective	3	6	MATH 332	4	8	MATH 332	4	8	HTR 312	2	3	HTR 312	2	3
HTR 312	2	3	HTR 312	2	3	HTR 312	2	3	HTR 312	2	3	PHYS 302	3	3			
	18	30		17	29		23	40		22	39		23	38		17	30
<b>Seventh Semester</b>			<b>Seventh Semester</b>			<b>Seventh Semester</b>			<b>Seventh Semester</b>			<b>Seventh Semester</b>			<b>Seventh Semester</b>		
PHYS 401	3	4	PHYS 407	3	7	PHYS 401	3	4	PHYS 407	3	7	MATH 431	4	8	MATH 431	4	8
PHYS 411	3	6	PHYS 325	3	5	PHYS 411	3	6	PHYS 325	3	5	MATH elective	3/4	6	MATH elective	3/4	6
PHYS 421	3	6	Option Elective	3	6	PHYS 421	3	6	Option Elective	3	6	MATH elective	3	6	MATH elective	3	6
PHYS 443	4	8	Distribution Elective	3	6	PHYS 443	4	8	Distribution Elective	3	6	Science elective	3	5	Science elective	3	5
Unrestricted elective	3	7	Unrestricted elective	3	6	MATH 431	4	8	MATH 431	4	8	PHYS -- (Not 4)	3	4	Unrestricted elective	3	5
	16	31		15	30		20	38		19	38		19/20	33		16/17	30
<b>Eighth Semester</b>			<b>Eighth Semester</b>			<b>Eighth Semester</b>			<b>Eighth Semester</b>			<b>Eighth Semester</b>			<b>Eighth Semester</b>		
PHYS 402	3	6	PHYS 408	3	6	PHYS 402	3	6	PHYS 408	3	6	MATH elective	3/4	6	MATH elective	3/4	6
PHYS 412	3	6	PHYS 442	4	7	PHYS 412	3	6	PHYS 442	4	7	MATH elective	3	6	MATH elective	3	6
PHYS --	3	3	Option Elective	3	6	PHYS --	3	3	Option Elective	3	6	MATH elective	3	6	MATH elective	3	6
Unrestricted elective	3	7	Distribution Elective	3	6	Unrestricted elective	3	7	Distribution Elective	3	6	PHYS -- (Not 4)	3	4	Unrestricted elective	3	5
Unrestricted elective	3	7	Unrestricted elective	3	6	MATH -- (Not 1)	3	6	MATH -- (Not 1)	3	6	HSS	3	3	HSS	3	3
	15	29		16	31		15	28		16	31		20/21	33		17/18	30
	134	240		133	240		151	272		150	274		160/162	268		141/143	240
<b>OVERLOAD</b>							17			17			17/21				

**NOTLAR:**

\* Hazırlık proficiency sınavını C ile geçen matematik bölümü öğrencileri AE 111 ve AE 112 derslerini alır.

\*\* Temeli güçlü olan matematik öğrenciler Phys 101-102-201 yerine phys 121-201-202 alabilirler.

1) Matematik seçmeli dersinin kodu 3XX veya 4XX olmalıdır ve Matematik Bölümü ÇAP danışmanının onayı ile seçilmelidir.

2) Phys 311 yerine Phys 407 alınabilir.

3) Phys 380 yerine "Phys 401 ve Phys 402" veya Phys 511 alınabilir.

4) Fizik seçmeli dersinin kodu 3XX, 4XX veya 5XX olmalıdır ve Fizik Bölümü ÇAP danışmanının onayı ile seçilmelidir.