



IND YOUR COURSE

2009 - 2011
CATALOG ADDENDUM



Central New Mexico Community College

2010-2011 Catalog Addendum June 2010 • Volume 43

CNM MAIN CAMPUS

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CNM RIO RANCHO CAMPUS

2601 Campus Blvd. NE Rio Rancho, NM 87144

SECTION I – CATALOG CORRECTIONS

Page	Pag
CLEP chart - Humanities CNM course credit should be HUM 1111, 1121 for	Fine Arts - Art History Concentration Term 1: all listed requirements should
6 credits8	be 3 credit hours, not 3-4; Term 3: Foreign Language should be 3-4 hours;
	Term 4: Social/Behavioral Science requirement should be Fine Arts Elective;
Prerequisite Requirement Guide - Ways to Meet Prerequisites: For Required	Approved Electives: Fine Arts should be (6 Credit Hours Required)
Prerequisite of ENG 0550 - add ESOL 0551 with CR; For ENG 0750 - add ESOL	Approved Electives. Title Arts should be to electivitions hequired/
0751 with CR; For ENG 0950 - add ESOL 0951 with CR	Fine Arts - Art Studio Concentration Term 3: ARTS 2206 is listed twice.
0/31 WILLICK, FOI LING 0930 - add L3OL 0931 WILLICK	
Special Services - Contact Information: Main Campus phone number	Remove one and replace with a second Social/Behavioral Science Elective 128
	Fitness Technisism Terms 2: Charled be FITT 1570 and NUTD 1020
224-325925	Fitness Technician - Term 2: Should be FITT 1570 or NUTR 1020132
Architectural Engineering Drafting Technology - Term 3: ARDR 2192 is	General Studies - Biological/Physical Science Electives:
2 credits	add GEOG 1101/1192. Social/Behavioral Science: add GEOG 1102; PSCI 1101
	should be 1110135
Architectural Engineering Drafting Technology Certificate - Term 3:	
ARDR 1110 is 3 credits79	Geomatics Technology - Term 3: SUR 1017 is 2 credits137
Child, Youth and Family Development - Family Studies Concentration	Liberal Arts - Social/Behavioral Science: add to GEOG "- except Physcial
Term 1: Math requirement should be MATH 1110 or 1115 or 1315 or higher	Geography". Biological/Physical Science: add GEOG 1101/1192149
90	gpyg
	Medical Coding - Contact Information: Program Director/Chair phone
Child, Youth and Family Development - Social Work Concentration	number should be (505) 224-3905; Course Prerequisite(s): BIO 0950 is
Term 4: Math requirement should be MATH 1315 or 1320 or 1330 or higher;	recommended, not required154
Approved Electives should include ECME 1108, 2206, 2214, 2230, 2232, 2234,	recommended, not required
	Metals Technology with Welding Concentration: IT 1010 should be listed as
2690, 2790, EDUC 20962996, SPED 2201, 2290; Biological/Physical Science	a required course; total credits should be 61-64
Electives - remove "select from two different subject areas". List should read	a required course; total credits should be 61-64100
ASTR 1110/1192; BIO 1010/1092 or higher; CHEM 1410/1492 or higher; PHYS	Name in a Constitution of the Constitution of
1510/1592 or higher91	Nursing - Special Requirements for Nursing Programs- delete "Students
	must have a valid social security number in order to participate in the criminal
Computing Technology - Computer Animation Concentration Term 1:	screening."161
CIS 1130 should be CIS 133098	
	Paralegal Studies Certificate - Course Prequisites should read: "a bachelor
Construction Management Technology - COMM 2221 should be listed as a	or an associate's degree from a regionally accredited college or university"
COMM Elective not a Technical Elective100	
Construction Estimating & Scheduling - Term 1: Excel Complete should be	Radiologic Technology - Required Courses: BIO 2310/2392 should be
CIS 1173100	2310/2292180
Court Reporting - Terms 2, 3, 4, 5: "B" or better grade is required in the	Surgical Technology - Required Program Courses: remove BIO 1410/1492
following courses CR1131 , CR1211, CR1212, CR1213105	(1410/1492 may be prerequisites for other required courses)
Criminal Justice - Term 2: FITT 1792 course title is "Physical Fitness I"; Term 4:	Teacher Education - Bilingual Elementary, Elementary and Special
CJ 2515/2692 should be 4 credit hours; add CJ 2999 Criminal Justice Capstone	Education Concentrations Term 1: Replace HUM 1111 with HIST 1102 or HIST
Course - 1 credit; Approved Criminal Justice Electives: CJ 2005 course title is	1161 or HIST 1162. Term 2: Replace HIST 1102 or HUM 1121 with HIST 1101 or
"Probation and Parole"; Approved General Electives: replace EMS 1010 with	HIST 1102 or HIST 1161 or HIST 1162. Term 3: Replace HIST 1161 or 1162 with
	HIST 1101 or HIST 1102 or HIST 1161 or HIST 1162
EMS 1053 + EMS1093; Total hours should be 66-67107	11131 1101 0111131 1102 0111131 1101 0111131 1102107
Fouls Childh and Multi-ultimatement Education Towns 1: Mathematical and all and	Veterinary Technology - Petitioning: add bullet of "Have a High School
Early Childhood Multicultural Education - Term 1: Math requirement should	
be MATH 1110 or 1115 or 1315 or higher116	diploma or equivalent"194
Emergency Room Technician - Course Prerequisites: should be "or Current	Veteriary Technology - Course Prerequisites: add "High School diploma or
EMT-I New Mexico State License"122	equivalent"
EM1-1 New Mexico State License122	cquivalent173
Environmental Safety and Health - Program Description: Change	BA 2226 - Prerequiste: should be BA 2222 or HT 2141 or department approva
"Certification" to "Card" for 40-Hour Hazardous Waste Operations Training	213
	213
Certification, 10-Hour OSHA General Industry Training Certification, 30-Hour	BIO 2210 - Delete Pre- or corequisite: BIO 2292216
OSHA General Industry Training Certification, 8-Hour Confined Space Entry	210 22.10 Deleter i e di corequisite dio 2272210
Training Certification, 8-Hour Red Cross Workplace First Aid/CPR Training	CDV 2210 - Add Corequisite: CDV 2890220
Certification; Term 4: CHEM 2210 should be 4 credit hours; Term 5: PHYS 1010	220 10 rau corequisite. CDV 2070220
should be 3 credit hours; Total credit hours should be 63-65125	CIS 1173 - Remove "DL Only" from title and "This course is offered via distance
	learning only"
	1501111110 OTIV

SECTION I — CATALOG CORRECTIONS (continued)

Page	Page
CIS 1183 - Remove "DL Only" from title and "This course is offered via distance learning only"222	ESH 2009 - Course description: Division of Labor should be Department of Labor251
CIS 2147 - should be 3 credit hours225	ESH 2018 - Course description: Division of Labor EPT 2016 should be ESH
COS 2492 - Prerequisite: should be COS 1195 or department approval	2016251 ESH 2407 - Prerequisite: should be ESH 1009 + ESH 2410; or department
CULN 1111 - Prerequisite: should be CULN 1101 or HT 1101; CULN 1102 234	approval252 HIT 1020 - Prerequisite: should be RDG 0750 or equivalent placement
CULN 1130 - Prerequisite: should be CULN 1101 or HT 1101; CULN 1102	scores, see page 12 of the 2009-11 Catalog261
DMS 1511 - Corequisite: should be DMS 1503 + 1575 + 1590	HIT 1030 - Prerequisite: should be RDG 0750 + ENG 0950 or appropriate placement scores, see page 12. Pre- or corequisite: should be HIT 1010 or department approval261
ECME 1190 - Corequisite: should be ECME 1109238	HIT 1090 - Remove Pre- or Corequisite. Add Prerequisite: BA 1131.
ECME 2204 - Remove Corequisite: ECME 1190238	Corequisite: should be HIT 1060 + HIT 1070261
ELEC 2010 - Prerequisite: should be ELEC 1301 + ELEC 1392243	MEMS 2005 - Prerequisite: should be MEMS 1001. Corequisite: should be MEMS 2001270
ELTR 2392 - Pre- or corequisite: should be ELEC 2210 or department approval245	MEMS 2092 - Prerequisite: should be SMT 2001 + SMT 2092271
EMS 1413 - Prerequisite: should be EMS 1053 + 1093 or EMS 1010 (2007-09); Pre- or corequisite: should be EMS 1493246	MLT 1012 - Prerequisites: should be BIO 1310 (or BIO 2210 + 2310) + BIO 1392 (or BIO2310 + 2392); BIO 1410 + 1492 + 2110 + 2192; ENG 1101 or 1102; CHEM 2210 or CHEM 2710/2792; Humanities or Social/Behavioral
EMS 1493 - Pre- or co requisite: should be EMS 1413246	Science Elective; MATH 1330; department approval. Pre- or corequisite should be: MLT 1007. Corequisite should be: MLT 1014 + 1090 + 1092 + 1192 + 1290271
EMS 2203 - Prerequisite: should be EMS 1053 + 1093 or EMS 1010 (2007-09); RDG 0950 or appropriate placement scores, see page 12 of the 2009-11 Catalog	NA 1014 - Add Pre- or corequisite: HLTH 1001273
EMS 2207 - Prerequisite: should be EMS 1053 + 1093 or EMS 1010	NAHA 1014 - Add Pre- or corequisite: HLTH 1001273
(2007-09); MATH 0930 + RDG 0950 or appropriate placement scores, see page 12 of the 2009-11 Catalog247	NURS 1002 - Add Prerequisite: department approval274
EMS 2213 - Prerequisite: should be EMS 1053 + 1093 or EMS 1010 (2007-09); MATH 0930 + RDG 0950 or appropriate placement scores, see	PC 2015 - Prerequisite: should be ELEC 2001 or ELEC 1201; ELEC 1292277 PC 2020 - Prerequisite: should be ELEC 2005 or ELEC 1301; ELEC 1392277
page 12 of the 2009-11 Catalog247	·
EMS 2217 - Prerequisite: should be EMS 1053 + 1093 or EMS 1010 (2007-09); MATH 0930 + RDG 0950 or appropriate placement scores, see	PHOT 2005 - Prerequisite: should be ELEC 1004 + ELEC 1092278 SMT 2001 - Prerequisite: should be ELEC 1004 + 1092 + 1101 + 1192.
page 12 of the 2009-11 Catalog247	Corequisite: should be SMT 2092288
EMS 2223 - Prerequisite: should be EMS 1053 + 1093 or EMS 1010 (2007-09); MATH 0930 + RDG 0950 or appropriate placement scores, see page 12 of the 2009-11 Catalog247	SMT 2092 - Course description: should be "Provides a lab for SMT 2001. Students meet twice per week."289
EMS 2293 - Prerequisite: should be EMS 1053 + 1093 or EMS 1010 (2007-09); MATH 0930 + RDG 0950 or appropriate placement scores,	SPAN 2225 - Prerequisite: should be SPAN 2202 or SPAN 2276 or SPAN 2376 or department approval290
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ESH 1571 - Prerequisite: should be ESH 1009 or department approval .251	
ESH 2006 - Course description: Division of Labor should be Department of	

SECTION II – ARTS AND SCIENCES COURSE CATEGORIES

ARTS AND SCIENCES COURSE CATEGORIES

Courses numbered 1000 and above in the subject codes listed below are offered through CNM's School of Communication, Humanities & Social Sciences and School of Math, Science & Engineering and are grouped into specific discipline areas. Many programs of study require some coursework from these areas; the course sequence charts in the Programs of Study section list the specific discipline area (for example, Social/Behavioral Science). These course categories are listed with an asterisk (*). Below is a guide to which subject codes are in each discipline:

English/Communication

ENG - English

COMM - Communication

JOUR - Journalism

Biological/Physical Science (updated)

ASTR - Astronomy

BIO - Biology

CHEM - Chemistry

GEOG - Physical Geography

PHYS - Physics

Fine Arts

ARTS - Art Studio

ARTH - Art History

MUS - Music

THEA - Theatre

Language

ARBC - Arabic

FREN - French

GER – German

PORT – Portuguese

SPAN - Spanish

Humanities

CST - Cultural Studies

ENG - English (Literature)

GNHN - General Honors

HIST - History

HUM - Humanities

PHIL - Philosophy

RLGN - Religion

Social/Behavioral Science (updated)

ANTH - Anthropology

ECON - Economics

GEOG - Geography (except Physical Geography)

GNHN - General Honors

PSCI - Political Science

PSY – Psychology

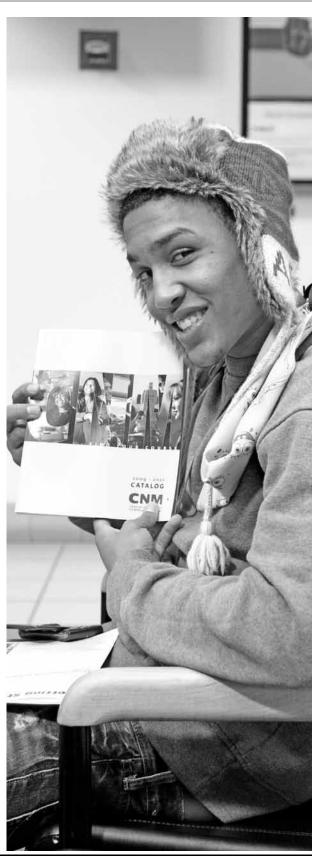
SOC – Sociology

Mathematics

MATH - Mathematics

Nutrition

NUTR - Nutrition



CREDIT HOURS

<u>SECTION III – DISCONTINUED PROGRAMS</u>

The following programs are being discontinued and are not accepting new students

Aerospace Technology (AAS Degree)

Computing Technology (AAS Degree)

Computing Technology (Certificate)

Nursing Assistant Certificate – Students wishing to take coursework to be eligible for the Certified Nursing Assistant state exam may register for the Nursing/Home Health Attendant (NAHA) Certificate program. The nursing home health care attendant program no longer provides: Cardio Pulmonary Resuscitation (CPR), Blood Borne Pathogens (BBP), First Aid and the Health Insurance Portability and Accountability Act (HIPAA).

Professional Pilot and Flight Instruction (Certificate)

SECTION IV - NEW AND UPDATED PROGRAMS

BIOLOGY

School of Math, Science & Engineering

Contact Information: Program information is available from the School of Math, Science & Engineering at (505) 224-3561 or from Academic Advisement and Career Development at (505) 224-4321.

■ Associate of Arts in Biology

PROGRAM DESCRIPTION

The Associate of Arts degree in Biology is a 5-semester program consisting of 68-70 hours of coursework. It includes the 35-hour general education core recognized by the New Mexico Higher Education Department as a foundation for degree completion. It also includes the all of the Biology coursework that would typically be completed during the first two years of a baccalaureate degree program, as well as the requisite courses in Mathematics, Chemistry and Physics.

CAREER AND EDUCATIONAL OPPORTUNITIES

Students who complete the Associate of Arts degree in Biology should be able to transfer to any receiving institution and enjoy junior level status. Completion of a baccalaureate degree in Biology provides students with multiple pathways to employment and to graduate and professional programs, including medicine and dentistry.

Exit competencies for this program of study are available at cnm.edu/exitcomp.

For the graduation policy refer to page 46 of the 2009-2011 Catalog, cnm.edu or the Students tab in myCNM.

COURSE PREREQUISITE(S)

Students must meet prerequisites by placement scores or specific coursework. Please see Course Descriptions for prerequisite information.

COURSE	ACCUPLACER SCORE OR EQUIV.
ENG 0950 Essay Writing	85
RDG 0950 Reading & Critical Thinking	80
For MATH 1460:	
MATH 1315 College Algebra	
OR College Level Math score of	86
For MATH 1710:	
MATH 1410 Trigonometry and Math 1415 Advanced	Algebra
OR College Level Math score of	100
C	

RECOMMENDED SEQUENCE OF COURSES

Term 1 Social /Behavioral Sciences Approved Elective 3 ENG 1101 College Writing 3 CHEM 1710 General Chemistry I 3 CHEM 1792 General Chemistry I Lab 1 MATH 1460 (or 1710) Elements of Calculus I (Calculus I) 3 (4)
Term 2 ENG 1102 Analytical and Argumentative Writing 3 BIO 1510/1592 Cell Biology 4 CHEM 1810 General Chemistry II 3 CHEM 1892 General Chemistry II Lab 1 MATH 1465 (or 1715) Elements of Calculus II (Calculus II) 3 (4)
Term 3 Humanities Approved Elective 3 COMM 1130 Public Speaking 3 BIO 1610/1692 Genetics 4 CHEM 2710 Organic Chemistry I 3 CHEM 2792 Organic Chemistry I Lab 1
Term 4 Humanities Approved Elective
Term 5 Humanities OR Social/Behavioral Sciences Approved Elective
Associate of Arts in Biology68-70

APPROVED ELECTIVES

HUMANITIES ENG 1150..... HIST 1101, 1102, 1161, 1162, 2260..... PHIL 1110 RLGN 1107.....

SOCIAL/BEHAVIORAL SCIENCE

ANTO TTUT, TTU, TTSU	
ECON 2200, 2201	. :
PSCI 1101, 2200, 2220, 2240	
PSY 1105	
SOC 1101	. :

CLINICAL LABORATORY ASSISTANT

School of Health, Wellness & Public Safety

Contact Information: Program information is available from the School of Health, Wellness & Public Safety Office at (505) 224-4111 or from Academic Advisement and Career Development at (505) 224-4321.

■ Certificate of Completion Clinical Laboratory Assistant

Clinical Laboratory Assistant is now a one term program. Prerequisites have changed in the Clinical Laboratory Assistant program. See the 2009-11 Catalog for detailed program information.

COURSE PREREQUISITE(S)

Students must meet prerequisites by placement scores or specific coursework. Please see Course Descriptions for prerequisite information.

High School Diploma or Equivalent

HLTH 1001 Clinical Preparation (or department approval)

PHLB 1010 Phlebotomy Theory (or department approval)

PHLB 1090 Phlebotomy Clinical Experience (or department approval)

PHLB 1092 Phlebotomy Lab (or department approval)

Required Courses

Certificate in Clinical Laboratory Assistant	. 9
CLA 1590 Clinical Experience	3
CLA 1092 Basic Clinical Laboratory Techniques	
CLA 1012 Basic Clinical Laboratory Theory	
MLT 1007 Clinical Success Seminar	. 1
COURSE CREDIT HOU	RS

DENTAL ASSISTING

School of Health, Wellness & Public Safety

Contact Information: Program information is available from the School of Health, Wellness & Public Safety office at (505) 224-4111 or Academic Advisement and Career Development (505) 224-4321 or from Program Director/Chair at (505) 224-5247. cnm.edu/dept/hwps/progs

■ Certificate of Completion in Dental Assisting

Beginning with the Fall 2010 term, the Dental Assisting program will use a petitioning process for entry into the program. Go to cnm.edu/dentalassisting for more information on the petitioning process. See the 2009-11 Catalog for detailed program information.

DIETARY MANAGER

School of Math, Science & Engineering

Contact Information: Program information is available from the School of Math, Science & Engineering at (505) 224-3561 or from Academic Advisement and Career Development at (505) 224-4321.

■ Certificate of Completion in Dietary Manager

PROGRAM DESCRIPTION

The Dietary Manager Certificate of Completion is a two-term, 23 - 28 credit hour program that focuses on the principles and practices relating to the administration of food service systems in institutional settings, and that prepares individuals to manage such operations in public and private facilities. Dietary Managers work with registered dietitians to provide quality food production, service, and nutritional care and are an integral part of health care and food service management teams. The program will include instruction

in human nutrition, food safety, the design and organization of food service systems, purchasing, and personnel management. The program includes classroom and lab time. Students will complete 180 hours of supervised practice in accredited facilities. Upon completion of the program, students will be eligible to sit for the Dietary Manager Association's national exam and earn the CDM (Certified Dietary Manager) and CFPP (Certified Food Protection Professional) credentials. The CDM and CFPP are nationally recognized as experts in managing dietary operations.

SPECIAL REQUIREMENTS

Criminal Background/Drug Screen: Students are required to undergo a routine drug screening and a state and federal criminal background check with fingerprints prior to beginning the program or prior to beginning their internship. For information on the criminal background check, please note the complete description on page 56 under the School of Health, Wellness & Public Safety description. Students with a disqualifying conviction will not be allowed to start or remain in the program.

Students must be in good physical and psychological health and able to lift 30 pounds. Completed physical examination and health forms with evidence of current immunizations (tetanus, rubella, rubeola and hepatitis B) and statement that student is free from tuberculosis in a transmissible state must be presented.

CAREER AND EDUCATIONAL OPPORTUNITIES

Graduates earn competitive salaries in hospitals, nursing facilities, residential care sites, schools, and commercial food service.

Exit competencies for this program of study are available at cnm.edu/exitcomp.

For the graduation policy refer to page 46 of the 2009-2011 Catalog, cnm.edu or the Students tab in myCNM.

COURSE PREREQUISITE(S)

Students must meet prerequisites by placement scores or specific coursework. Please see Course Descriptions for prerequisite information.

COURSE	ACCUPLACER SCORE OR EQUIV
MATH 0930 Algebraic Problem Solving I or Element	tary Algebra72
RDG 0950 Reading and Critical Thinking	80
ENG 0950 Essay Writing	85

See page 12 of the 2009 Catalog for Accuplacer score equivalencies.

RECOMMENDED SEQUENCE OF COURSES	
COURSE	CREDIT HOURS

TERM 1	
CULN 1101	1
Or	
HT 1101	3
CULN 1103 Safety and Sanitation Principles	3
NUTR 1010 Personal and Practical Nutrition	3
NUTR 1015 Intro to Medical Nutrition Therapy	3
NUTR 1090 Dietary Manager Internship I	2
TERM 2	
CULN 1010 Food Production and Service Fundamentals	3
Or	
CULN 1111 Cooking Fundamentals I	5
HT 2201 Hospitality Operations Management	
NUTR 1091 Dietary Manager Internship II	2
Approved Elective (See approved Elective List)	3 - 4
Certificate in Dietary Manager	23 - 28
APPROVED ELECTIVES	
NUTR 1020 Introduction to Sports Nutrition	3
FITT 1570 Applied Nutrition for Sport and Exercise	3
SPAN 1101 Beginning Spanish or higher	3 - 4

ELECTRONICS TECHNOLOGY

School of Applied Technologies

Contact Information: Program information is available from the School of Applied Technologies Office at (505) 224-3740 or from Academic Advisement and Career Development at (505) 224-4321.

- Associate of Applied Science Degree in Electronics Technology
- **■** Certificate of Completion in Electronics Technology

PROGRAM DESCRIPTION

The Electronics Technology program provides students with a broad base of skills in analog and digital electronics with electromechanical and computer applications. Laboratory exercises provide students with hands-on experiences throughout the entire program. In addition to the fundamental skills developed in the certificate program, the degree program is designed to provide students with exposure to emerging and current technologies in the fourth and fifth terms.

Many of the courses in the Electronics Technology program develop the skills sets that are verified by industry certifications as specified by the Electronics Technicians Association and other vendors. Students completing the Associate degree in Electronics Technology will also be eligible to sit for the Certified LabVIEW Associate Developer (CLAD) exam at no charge.

SPECIAL REQUIREMENTS

Students must have normal color differentiation to work with colored wiring and components.

CAREER AND EDUCATIONAL OPPORTUNITIES

IT 1010 Introduction to Computers

Electronics Technology is one of the most rapidly changing technical fields in America today. Graduates will be eligible for entry-level technical positions in a wide range of disciplines utilizing digital, electromechanical and semiconductor devices.

Exit competencies for this program of study are available at cnm.edu/exitcomp

For the graduation policy refer to page 46 of the 2009-2011 Catalog, cnm.edu or the Students tab in myCNM.

COURSE PREREQUISITE(S)

COURSE	ACCUPLACER SCORE OR EQUIV.	
ENG 0950 Essay Writing	85	
MATH 0940 Algebraic Problem Solving II or Elementary Algebra score of81		
RDG 0950 Reading and Critical Thinking	80	

Students should see an academic advisor to customize their educational plans. Students must meet prerequisites by placement scores or specific course work. Please see Course Descriptions for prerequisite(s) information.

See page 12 of the 2009 Catalog for Accuplacer score equivalencies.

RECOMMENDED SEQUENCE OF COURSES

COURSE	CREDIT HOURS
TERM 1	
ELEC 1002 Survey of Adv. Technologies Career Pathways	1
ELEC 1004 DC and AC Circuits	4
ELEC 1092 DC and AC Circuits Lab	2
ELEC 1010 Electronics Math	
ENG 1101 (or 1102) College Writing	3
TERM 2	
ELEC 1101 Digital Circuits Concepts & Design	3
ELEC 1192 Digital Circuits Concepts & Design Lab	
ELEC 1201 Semiconductor/Solid State Devices	4
ELEC 1292 Semiconductor/Solid State Devices Lab	
Humanities or Social/Behavioral Science Elective	3
TERM 3	
ELEC 1301 Electromechanical Devices & Systems	3
ELEC 1392 Electromechanical Devices & Systems Lab	
MATH 1310 (or higher) Intermediate Algebra	
ENG 1119 (or 2219) Technical Communications	3
Certificate in Electronics Technology	41-42

TERM 4

ELEC 1022 Soldering Standards	2
ELEC 1401 Telecommunication Circuits & Systems	3
ELEC 1492 Telecommunication Circuits & Systems Lab	
ELEC 2010 Intro. to Embedded Systems - Microcontrollers	4
Technical Electives	3
TERM 5	
ELEC 2040 Systems Simulation	3
ELEC 2999 Capstone	2
Technical Electives	3
BIO Science Lecture/Lab	4
Or	
CHEM Science Lecture/Lab	4
Or	
PHYS Science Lecture/Lab	4-5
Associate of Science in Electronic Technology	67-69
APPROVED TECHNICAL ELECTIVES	
BIO any not used, including Special Topics	1-4
CAD any, including Special Topics	1-6
CHEM any not used, including Special Topics	4
PHYS any not used, including Special Topics	1-5
EDT any, including Special Topics	1-6
ELEC any not used, including Special Topics	1-6
ELTR any, including Special Topics	1-6
ENGR any, including Special Topics	1-6
MATT any, including Special Topics	
PC any, including Special Topics	1-6



EMERGENCY MEDICAL SERVICES

School of Health, Wellness & Public Safety

Contact Information: Program information is available from the School of Health, Wellness & Public Safety Office at (505) 224-4111 or from Academic Advisement and Career Development at (505) 224-4321.

- Certificate of Achievement in Emergency Medical Technician Intermediate
- Certificate of Achievement in Emergency Room Technician

The Emergency Medical Technician - Intermediate and Emergency Room Technician programs are now two term programs.

See 2009-11 catalog for program information.

EMERGENCY MEDICAL TECHNICIAN - INTERMEDIATE

COURSE PREREQUISITE(S)

Current proof of professional CPR

Students must meet prerequisites by placement scores or specific coursework. Please see Course Descriptions for prerequisite information.

COURSE	ACCUPLACER SCORE OR EQUIV
MATH 0930 Algebraic Problem Solving I or Elementa	ry Algebra score of72
RDG 0950 Reading and Critical Thinking	80
EMS 1053 EMT – Basic Theory	6
EMS 1093 EMT – Basic Lab	
Or	
EMS 1010 Basic EMT Skills (2007 - 2009)	
Or	
Current EMT-B New Mexico License	
Or	
Current EMT-B NREMT Certification	
And	

REQUIRED COURSES

EMS 1493 EMT – Intermediate Lab	
EMS 1490 EMT – Intermediate Clinical	
EMS 1413 EMT – Intermediate Theory4	
TERM 1	
COURSE CREDIT HOURS	

EMERGENCY ROOM TECHNICIAN

Students must meet prerequisites by placement scores or specific coursework. Please see Course Descriptions for prerequisite information.

See page 12 of the 2009 Catalog for Accuplacer score equivalencies.

COURSE	ACCUPLACER SCORE OR EQUIV.
MATH 0930 Algebraic Problem Solving I or	Elementary Algebra score of72
RDG 0950 Reading and Critical Thinking	80
EMS 1413 EMT – Intermediate Theory	6
EMS 1493 EMT – Intermediate Lab	2
Or	
Current EMT-I New Mexico License	
Or	
Current EMT-I NREMT Certification	
And	
Current proof of professional CPR	

REQUIRED COURSES

COURSE	CREDIT HOURS
TERM 1	
EMS 1713 ER Tech Theory	1
EMS 1790 ER Tech Clinical	1
TERM 2	
TERM 2 EMS 1793 ER Tech Lab	1

LANDSCAPING

School of Applied Technologies

Contact Information: Program information is available from the School of Applied Technologies Office at (505) 224-3711 or from Academic Advisement and Career Development at (505) 224-4321.

- **■** Certificate of Completion in Landscape Construction Crew Leadership
- Certificate of Completion in Landscape Maintenance Crew Leadership

PROGRAM DESCRIPTION

The Landscaping Program provides students with skills for employment as construction or maintenance crew leaders in the original "GREEN Industry", an industry that has been concerned with environmental issues at every level. This program lays the foundation through classes in Plant and Soil Science, Crew Leadership and Irrigation, and provides the student a solid understanding of the plant-soil-water relationship. The student then advances to second term courses focusing on either Landscape Construction or Maintenance.

SPECIAL REQUIREMENTS

Students will be required to purchase text books, hand tools, personal protective equipment, and any related certification exams. Students should also be able to lift and carry 50 pounds and enjoy working outdoors. Graduates entering the industry are generally expected to possess a current driver's license with a clean driving record (no DWI's/DUI's), a good work ethic and the ability to be a team player. Conversation Spanish skills are beneficial.

CAREER AND EDUCATIONAL OPPORTUNITIES

Graduates from the program can expect a variety of job opportunities from small self-employed shops to large organizations in the private and public sectors. This industry has a place for every graduate with a passion. Remember, the Landscape Industry IS the original "GREEN Industry" and this is your opportunity to make a positive influence on every aspect of your environment.

Exit competencies for this program of study are available at cnm.edu/exitcomp

For the graduation policy refer to page 46 of the 2009-2011 Catalog, cnm.edu or the Students tab in myCNM.

COURSE PREREQUISITE(S)

COURSE	ACCUPLACER SCORE OR EQUIV
MATH 0550 Basic Mathematics or Arithmetic score of	3

Students should see an academic advisor to customize their educational plans. Students must meet prerequisites by placement scores or specific course work. Please see Course Descriptions for prerequisite(s) information.

See page 12 of the 2009 Catalog for Accuplacer score equivalencies.

RECOMMENDED SEQUENCE OF COURSES

COURSE	CREDIT HOURS
TERM 1	
LAND 1121 Plant Science	3
LAND 1221 Soil Science	3
LAND 1321 Comprehensive Irrigation Techniques	
LAND 1501 Landscape Design	
LAND 1701 Crew Leadership	
ESH 2006 Occupational Safety for Construction I	1
TERM 2	
LAND 2110 Landscape Construction	3
LAND 2130 Light Truck & Trailer Operation	
LAND 2140 Construction Equip. Safety & Fundamentals	2
LAND 1301 Irrigation Design	
PLMB 1205 Backflow Prevention	2
Certificate in Landscape Construction Crew Leadership	26
TERM 1	
LAND 1121 Plant Science	3
LAND 1221 Soil Science	3
LAND 1321 Comprehensive Irrigation Techniques	2
LAND 1501 Landscape Design	
LAND 1701 Crew Leadership	
ESH 2006 Occupational Safety for Construction I	1
TERM 2	
LAND 1421 Weed & Pest Control	3
LAND 2120 Landscape Maintenance	
LAND 2130 Light Truck & Trailer Operation	2
LAND 2150 Effective Irrigation Scheduling	
PLMB 1205 Backflow Prevention	2
Certificate in Landscape Maintenance Crew Leadership	27

NURSING

School of Health, Wellness & Public Safety

Contact Information: Program information is available from the School of Health, Wellness & Public Safety Office at (505) 224-4111 or from Academic Advisement and Career Development at (505) 224-4321

■ Associate of Science in Nursing

■ Certificate of Completion in Practical Nursing

Effective Fall 2010, Nursing and Practical Nursing are now limited-entry programs . To be eligible to declare either Nursing or Practical Nursing as a major, students must be eligible to complete the "Application Process" as outlined in the Catalog. At the time of application, the student must declare either Nursing or Practical Nursing as a major.

CREDIT HOURS

MANUFACTURING TECHNOLOGY

School of Applied Technologies

Contact Information: Program information is available from the School of Applied Technologies Office at (505) 224-3340 or from Academic Advisement and Career Development at (505) 224-4321.

- Associate of Applied Science Degree in Manufacturing Technology
- Post Degree Certificate of Completion in Manufacturing Technology

PROGRAM DESCRIPTION

The Manufacturing Technology AAS program provides students with a broad base of skills in analog and digital electronics with the focus on MEMS (Micro-Electro Mechanical Systems) and Semiconductor Manufacturing (SMT). Training is provided in the fundamental concepts of electronics and micro-machines. The program of study uses laboratory facilities containing modern equipment for testing, troubleshooting, calibrating, analyzing and designing electronic and MEMS systems. The post degree certificate is designed for those who already possess the core Electronics Technology associate's degree or a degree in a related technical field from an accredited college or university.

SPECIAL REQUIREMENTS

Students must have normal color differentiation to work with colored wiring and components.

CAREER AND EDUCATIONAL OPPORTUNITIES

Graduates will start as engineering assistants or support technicians. Typical assignments include design/production assistant, manufacturing support and mechanical/utilities technician. Major employers in this field include manufacturing enterprises, private contractors, consulting firms, government agencies and public utilities.

Exit competencies for this program of study are available at cnm.edu/exitcomp.

For the graduation policy refer to page 46 of the 2009-2011 Catalog, cnm.edu or the Students tab in myCNM.

COURSE PREREQUISITE(S)

COURSE	ACCUPLACER SCORE OR EQUIV.
ENG 0950 Essay Writing	85
MATH 0940 Algebraic Problem Solving II or Elementary Algebra score of81	
RDG 0950 Reading and Critical Thinking	80

Students should see an academic advisor to customize their educational plans. Students must meet prerequisites by placement scores or specific course work. Please see Course Descriptions for prerequisite(s) information.

See page 12 of the 2009 Catalog for Accuplacer score equivalencies.

Post Degree Certificate

COURSE

Students must have completed the Electronics Technology associate's degree or a bachelor's degree in a related field from a regionally accredited college or university, and obtain department approval to pursue the Post Degree Certificate of Completion in Manufacturing Technology.

RECOMMENDED SEQUENCE OF COURSES

TERM 1 ELEC 1002 Survey of Adv. Technologies Career Pathways	4 2 4 3 4 3 4 3 4 3 4 3 4 3 4 3 3 4 3 3 2
ELEC 1004 DC and AC Circuits ELEC 1092 DC and AC Circuits Lab ELEC 1010 Electronics Math ENG 1101 (or 1102) College Writing TERM 2 ELEC 1101 Digital Circuits Concepts & Design ELEC 1192 Digital Circuits Concepts & Design Lab ELEC 1192 Digital Circuits Concepts & Design Lab ELEC 1291 Semiconductor/Solid State Devices ELEC 1292 Semiconductor/Solid State Devices Lab Humanities or Social/Behavioral Science Elective TERM 3 ELEC 1301 Electromechanical Devices & Systems ELEC 1392 Electromechanical Devices & Systems Lab MATH 1310 (or higher) Intermediate Algebra ENG 1119 (or 2219) Technical Communications Certificate in Electronics Technology A TERM 4 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory SMT 2092 Manufacturing Technology Theory Lab MT 2095 Statistical Controls BIO Science Lecture/Lab Or CHEM Science Lecture/Lab Or PHYS Science Lecture/Lab TERM 5 MEMS 2001 Manufacturing Process MEMS 2005 MEMS Design 1 MEMS 2015 MEMS Manufacturing Technology Theory MEMS 2015 MEMS Manufacturing Technology Theory MEMS 2015 Power RF Associate of Applied Science in Manufacturing Technology 71 TERM 1 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory SMT 2001 Manufacturing Technology Theory SMT 2001 Manufacturing Technology Lab PC 2015 Power RF Associate of Applied Science in Manufacturing Technology 71 TERM 1 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Lab MT 2005 Statistical Controls MT 2005 Statistical Controls MT 2005 Statistical Controls MT 2005 Statistical Controls MT 2005 Statistical Controls	4 2 4 3 4 3 4 3 4 3 4 3 4 3 4 3 3 4 3 3 2
ELEC 1092 DC and AC Circuits Lab ELEC 1010 Electronics Math ENG 1101 (or 1102) College Writing TERM 2 ELEC 1101 Digital Circuits Concepts & Design ELEC 1192 Digital Circuits Concepts & Design Lab ELEC 1291 Semiconductor/Solid State Devices ELEC 1292 Semiconductor/Solid State Devices Lab Humanities or Social/Behavioral Science Elective TERM 3 ELEC 1301 Electromechanical Devices & Systems ELEC 1392 Electromechanical Devices & Systems Lab MATH 1310 (or higher) Intermediate Algebra ENG 1119 (or 2219) Technical Communications Certificate in Electronics Technology 4 TERM 4 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory SMT 2005 Statistical Controls BIO Science Lecture/Lab Or CHEM Science Lecture/Lab Or PHYS Science Lecture/Lab TERM 5 MEMS 2001 Manufacturing Process MEMS 2005 MEMS Design 1 MEMS 2015 MEMS Manufacturing Technology Theory MEMS 2092 MEMS Manufacturing Technology Lab PC 2015 Power RF Associate of Applied Science in Manufacturing Technology 71 TERM 1 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory SMT 2001 Manufacturing Technology Lab MT 2005 Statistical Controls MT 2005 Statistical Controls	2 3 2 3 3 3 4 3 4 3 3 4 3 3 3 3 3 2
ELEC 1010 Electronics Math	4 3 4 3 4 3 4 3 4 3 3 3 3 3 3 3 3 3 2
TERM 2 ELEC 1101 Digital Circuits Concepts & Design	3 4 3 4 3 4 3 4 3 4 3 3 2
TERM 2 ELEC 1101 Digital Circuits Concepts & Design ELEC 1192 Digital Circuits Concepts & Design Lab ELEC 1201 Semiconductor/Solid State Devices ELEC 1292 Semiconductor/Solid State Devices Lab Humanities or Social/Behavioral Science Elective TERM 3 ELEC 1301 Electromechanical Devices & Systems ELEC 1392 Electromechanical Devices & Systems Lab MATH 1310 (or higher) Intermediate Algebra ENG 1119 (or 2219) Technical Communications Certificate in Electronics Technology 4 TERM 4 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory SMT 2092 Manufacturing Technology Theory Lab MT 2005 Statistical Controls BIO Science Lecture/Lab Or CHEM Science Lecture/Lab Or PHYS Science Lecture/Lab TERM 5 MEMS 2001 Manufacturing Process MEMS 2005 MEMS Design 1 MEMS 2092 MEMS Manufacturing Technology Theory MEMS 2092 MEMS Manufacturing Technology Lab PC 2015 Power RF Associate of Applied Science in Manufacturing Technology TERM 1 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory SMT 2002 Manufacturing Technology Theory SMT 2003 Statistical Controls MT 2005 Statistical Controls MT 2005 Statistical Controls	3 4 3 4 3-4 3 11-42 3 2
ELEC 1101 Digital Circuits Concepts & Design ELEC 1192 Digital Circuits Concepts & Design Lab ELEC 1201 Semiconductor/Solid State Devices ELEC 1292 Semiconductor/Solid State Devices Lab Humanities or Social/Behavioral Science Elective TERM 3 ELEC 1301 Electromechanical Devices & Systems ELEC 1392 Electromechanical Devices & Systems Lab MATH 1310 (or higher) Intermediate Algebra ENG 1119 (or 2219) Technical Communications Certificate in Electronics Technology ATERM 4 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory Lab MT 2005 Statistical Controls BIO Science Lecture/Lab Or CHEM Science Lecture/Lab Or PHYS Science Lecture/Lab TERM 5 MEMS 2001 Manufacturing Process MEMS 2005 MEMS Design 1 MEMS 2015 MEMS Manufacturing Technology Theory MEMS 2092 MEMS Manufacturing Technology Lab PC 2015 Power RF Associate of Applied Science in Manufacturing Technology 71 TERM 1 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory SMT 2002 Manufacturing Technology Lab MT 2005 Statistical Controls MT 2005 Statistical Controls	2 3 4 3 4 3 3 3 1-42 3 3 2
ELEC 1192 Digital Circuits Concepts & Design Lab ELEC 1201 Semiconductor/Solid State Devices	2 3 4 3 4 3 3 3 1-42 3 3 2
ELEC 1201 Semiconductor/Solid State Devices ELEC 1292 Semiconductor/Solid State Devices Lab	4 2 3 4 3 4 3 3 1-42 3 3 2
ELEC 1292 Semiconductor/Solid State Devices Lab	2 3 4 3 3 3 3 3 3 3 3 2
TERM 3 ELEC 1301 Electromechanical Devices & Systems	3 4 .3-4 3 1-42
TERM 3 ELEC 1301 Electromechanical Devices & Systems	3 4 .3-4 3 1-42 3 3
ELEC 1301 Electromechanical Devices & Systems. ELEC 1392 Electromechanical Devices & Systems Lab MATH 1310 (or higher) Intermediate Algebra	4 .3-4 3 1-42 3 3 2
ELEC 1392 Electromechanical Devices & Systems Lab MATH 1310 (or higher) Intermediate Algebra	4 .3-4 3 1-42 3 3 2
MATH 1310 (or higher) Intermediate Algebra	3 1-42 3 3 2
ENG 1119 (or 2219) Technical Communications Certificate in Electronics Technology	3 1-42 3 3
TERM 4 MEMS 1001 Intro to MEMS. SMT 2001 Manufacturing Technology Theory	1-42 3 3
TERM 4 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory SMT 2092 Manufacturing Technology Theory Lab MT 2005 Statistical Controls BIO Science Lecture/Lab Or CHEM Science Lecture/Lab Or PHYS Science Lecture/Lab TERM 5 MEMS 2001 Manufacturing Process MEMS 2005 MEMS Design 1 MEMS 2015 MEMS Manufacturing Technology Theory MEMS 2092 MEMS Manufacturing Technology Lab PC 2015 Power RF Associate of Applied Science in Manufacturing Technology71 TERM 1 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Lab MT 2005 Statistical Controls	3 3
TERM 4 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory SMT 2092 Manufacturing Technology Theory Lab MT 2005 Statistical Controls BIO Science Lecture/Lab Or CHEM Science Lecture/Lab Or PHYS Science Lecture/Lab TERM 5 MEMS 2001 Manufacturing Process MEMS 2005 MEMS Design 1 MEMS 2015 MEMS Manufacturing Technology Theory MEMS 2092 MEMS Manufacturing Technology Lab PC 2015 Power RF Associate of Applied Science in Manufacturing Technology71 TERM 1 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Lab MT 2005 Statistical Controls	3 3
MEMS 1001 Intro to MEMS. SMT 2001 Manufacturing Technology Theory	3 2
SMT 2001 Manufacturing Technology Theory	3 2
SMT 2092 Manufacturing Technology Theory Lab	2
MT 2005 Statistical Controls BIO Science Lecture/Lab Or CHEM Science Lecture/Lab Or PHYS Science Lecture/Lab TERM 5 MEMS 2001 Manufacturing Process MEMS 2005 MEMS Design 1 MEMS 2015 MEMS Manufacturing Technology Theory MEMS 2092 MEMS Manufacturing Technology Lab PC 2015 Power RF Associate of Applied Science in Manufacturing Technology MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory SMT 2092 Manufacturing Technology Theory SMT 2005 Statistical Controls	
BIO Science Lecture/Lab	3
CHEM Science Lecture/Lab Or PHYS Science Lecture/Lab TERM 5 MEMS 2001 Manufacturing Process MEMS 2005 MEMS Design 1 MEMS 2015 MEMS Manufacturing Technology Theory MEMS 2092 MEMS Manufacturing Technology Lab PC 2015 Power RF Associate of Applied Science in Manufacturing Technology71 TERM 1 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory SMT 2092 Manufacturing Technology Lab MT 2005 Statistical Controls	
Or PHYS Science Lecture/Lab	
PHYS Science Lecture/Lab	4
TERM 5 MEMS 2001 Manufacturing Process	
MEMS 2001 Manufacturing Process MEMS 2005 MEMS Design 1 MEMS 2015 MEMS Manufacturing Technology Theory MEMS 2092 MEMS Manufacturing Technology Lab PC 2015 Power RF Associate of Applied Science in Manufacturing Technology TERM 1 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory SMT 2092 Manufacturing Technology Lab MT 2005 Statistical Controls	4-5
MEMS 2005 MEMS Design 1 MEMS 2015 MEMS Manufacturing Technology Theory MEMS 2092 MEMS Manufacturing Technology Lab PC 2015 Power RF Associate of Applied Science in Manufacturing Technology TERM 1 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory SMT 2092 Manufacturing Technology Lab MT 2005 Statistical Controls	
MEMS 2005 MEMS Design 1 MEMS 2015 MEMS Manufacturing Technology Theory MEMS 2092 MEMS Manufacturing Technology Lab PC 2015 Power RF Associate of Applied Science in Manufacturing Technology TERM 1 MEMS 1001 Intro to MEMS SMT 2001 Manufacturing Technology Theory SMT 2092 Manufacturing Technology Lab MT 2005 Statistical Controls	5
MEMS 2092 MEMS Manufacturing Technology Lab	
PC 2015 Power RF	3
Associate of Applied Science in Manufacturing Technology	2
TERM 1 MEMS 1001 Intro to MEMS	2
MEMS 1001 Intro to MEMS. SMT 2001 Manufacturing Technology TheorySMT 2092 Manufacturing Technology LabMT 2005 Statistical Controls	-73
SMT 2001 Manufacturing Technology Theory SMT 2092 Manufacturing Technology Lab MT 2005 Statistical Controls	
SMT 2092 Manufacturing Technology Lab	3
MT 2005 Statistical Controls	
BIO Science Lecture/Lab	
_	4
Or CHEM Science Lecture/Lab	4
Or	¬
PHYS Science Lecture/Lab	
	4-5
TERM 2	4-5
MEMS 2001 Manufacturing Process	
MEMS 2015 MEMS Design 1	5
MEMS 2015 MEMS Manufacturing Technology Theory	5
PC 2015 Power RF	5
Post Degree Certificate in Manufacturing Technology30	5 3 3

PHOTONICS TECHNOLOGY

School of Applied Technologies

Contact Information: Program information is available from the School of Applied Technologies Office at (505) 224-3340 or from Academic Advisement and Career Development at (505) 224-4321.

- Associate of Applied Science Degree in Photonics Technology
- Post Degree Certificate of Completion in Photonics Technology

PROGRAM DESCRIPTION

The program is designed to expose students to four major areas: laser systems, electronics, optics and electro-optics. Students study the laser both as an instrument and as an integral part of a system designed for industrial and scientific applications. The program includes topics such as laser alignment, safety and the use of lasers in electronics production, testing and maintenance. Through the program, students acquire a good working knowledge of light, optical principles, and optical components and systems. In addition, students receive in-depth classroom preparation in the scientific principles of laser and fiber optics to incorporate their skills and knowledge into developing electro-optical techniques and systems. The post degree certificate is designed for those who already possess the core Electronics Technology associate's degree or a degree in a related technical field from an accredited college or university.

SPECIAL REQUIREMENTS

Students must have normal color differentiation to work with colored lasers, wiring and components.

CAREER AND EDUCATIONAL OPPORTUNITIES

The national demand for photonics technician exceeds supply. Graduates will be eligible for entry-level technical positions in a wide range of scientific disciplines utilizing laser and electro-optic technology.

Exit competencies for this program of study are available at cnm.edu/exitcomp.

For the graduation policy refer to page 46 of the 2009-2011 Catalog, cnm.edu or the Students tab in myCNM.

COURSE PREREQUISITE(S)

COURSE	${\bf ACCUPLACERSCOREOREQUIV.}$
ENG 0950 Essay Writing	85
MATH 0940 Algebraic Problem Solving II or Element	tary Algebra score of81
RDG 0950 Reading and Critical Thinking	80

Students should see an academic advisor to customize their educational plans. Students must meet prerequisites by placement scores or specific course work. Please see Course Descriptions for prerequisite(s) information.

See page 12 of the 2009 Catalog for Accuplacer score equivalencies.

Post Degree Certificate

COLLDER

Students must have completed the Electronics Technology associate's degree or a bachelor's degree in a related field from a regionally accredited college or university, and obtain department approval to pursue the Post Degree Certificate of Completion in Photonics Technology.

RECOMMENDED SEQUENCE OF COURSES

COURSE CREDIT HOURS
TERM 1 ELEC 1002 Survey of Adv. Technologies Career Pathways
ELEC 1004 DC and AC Circuits4
ELEC 1092 DC and AC Circuits Lab
ELEC 1010 Electronics Math4
ENG 1101 (or 1102) College Writing
TERM 2
ELEC 1101 Digital Circuits Concepts & Design
ELEC 1192 Digital Circuits Concepts & Design Lab
ELEC 1201 Semiconductor/Solid State Devices
ELEC 1292 Semiconductor/Solid State Devices Lab
Humanities or Social/Behavioral Science
TERM 3
ELEC 1301 Electromechanical Devices & Systems
MATH 1310 (or higher) Intermediate Algebra3-4
ENG 1119 (or 2219) Technical Communications
Certificate in Electronics Technology41-42
TERM 4
PHOT 1001 Intro to Photonics & Photonics Safety4
PHOT 2001 Optics
PHOT 2005 Intro to Laser Systems
PC 2020 Vacuum Systems
TERM 5
PHOT 1010 Fiber Optics
PHOT 2020 Adv. Laser Systems6
PHOT 2999 Capstone
BIO Science Lecture/Lab4
Or
CHEM Science Lecture/Lab4 Or
PHYS Science Lecture/Lab4-5
Associate of Applied Science in Photonics Technology73-75
RECOMMENDED SEQUENCE OF COURSES
COURSE CREDIT HOURS
TERM 1
PHOT 1001 Intro to Photonics & Photonics Safety4
PHOT 2001 Optics
PHOT 2005 Intro to Laser Systems
TERM 2
PHOT 1010 Fiber Optics
PHOT 2020 Adv. Laser Systems
PHOT 2999 Capstone 3 BIO Science Lecture/Lab. 4
Or
CHEM Science Lecture/Lab4
Or
PHYS Science Lecture/Lab4-5
Post Degree Certificate in Photonics Technology32-33
rost Degree Certificate in Protonics (echnology32-33

CDEDIT HOUDS

PHYSICS

School of Math, Science & Engineering

Contact Information: Program information is available from the School of Math, Science & Engineering at (505) 224-3561 or from Academic Advisement and Career Development at (505) 224-4321.

- Associate of Arts in Physics
- Post Degree Certificate of Completion in Physics

PROGRAM DESCRIPTION

The Associate of Arts Degree in Physics affords students a rigorous curriculum that represents the equivalent of the first two years of a baccalaureate degree in physics. Incorporated into the degree are the basic physics, chemistry and mathematics courses that form the foundation of a physics baccalaureate degree. The program is versatile and prepares students for transfer to a four-year institution where they can pursue a baccalaureate in either physics, astronomy or geophysics.

SPECIAL REQUIREMENTS

Students must purchase a full-function graphing calculator

CAREER AND EDUCATIONAL OPPORTUNITIES

In general, the Associate of Arts degree in Physics provides the necessary foundation for pursuing a career in scientific research, engineering or science education. Specifically, the degree provides the preparation students require to continue their studies in physics, astronomy or geophysics at a four-year institution. The course work in this degree will transfer to other institutions of higher learning.

Exit competencies for this program of study are available at cnm. edu/exitcomp.

For the graduation policy refer to page 46 of the 2009-2011 Catalog, cnm.edu or the Students tab in myCNM.

COURSE PREREQUISITE(S)

Students must meet prerequisites by placement scores or specific coursework. Please see Course Descriptions for prerequisite information.

COURSE	ACCUPLACER SCORE OR EQUIV.
MATH 1410 - Trigonometry	college level math score of 100
MATH 1415 - Advanced Algebra	college level math score of 100
RDG 0950 - Reading and Critical Thinking	reading test score of 80
ENG 0950 - Essay Writing	sentence skills test score of 85

RECOMMENDED SEQUENCE OF COURSES

COURSE	REDIT HOURS
TERM 1	
ENG 1101 College Writing	3
MATH 1710 Calculus I	
PHYS 1710 General Physics I	
PHYS 1792 General Physics Lab I	
HUMANITIES APPROVED ELECTIVE (SEE LIST)	
TERM 2	
ENG 1102 Analytical and Argumentative Writing	3
MATH 1715 Calculus II	
PHYS 1810 General Physics II	
PHYS 1892 General Physics Lab II	
COMM 1130 Public Speaking	
HUMANITIES/SOCIAL/BEHAVIORAL SCIENCE	
APPROVED ELECTIVE (SEE LIST)	3
TERM 3	
MATH 2710 Calculus III	4
PHYS 2710 General Physics III	
CHEM 1710 General Chemistry I	
CHEM 1792 General Chemistry Lab I	
SOCIAL/BEHAVIORAL SCIENCE APPROVED	
ELECTIVE (SEE LIST)	3
TERM 4	
CHEM 1810 General Chemistry II	3
CHEM 1892 General Chemistry Lab II	
CSCI 1153 Programming in Matlab	
Or	
CSCI 1151 Introduction to Programming	
Or	
CSCI 1152 Programming in Java	
HUMANITIES APPROVED ELECTIVE (SEE LIST)	3
SOCIAL/BEHAVIORAL SCIENCE APPROVED	_
ELECTIVE (SEE LIST)	
Associate of Arts in Physics	62
APPROVED ELECTIVES	
HUMANITIES	
ENG 1150	2
HIST 1101, 1102, 1161, 1162, 2260	
PHIL 1110	
RLGN 1107,	
SOCIAL/BEHAVIORAL SCIENCE	_
ANTH 1101, 1110, 1130	
ECON 2200, 2201 PSCI 1101, 2200, 2220, 2240	
PSY 1105	
SOC 1101	3

<u>SECTION V – COURSE</u> DESCRIPTIONS

CLA – Clinical Laboratory Assistant Health, Wellness and Public Safety

CLA 1012 – Basic Clinical Laboratory Theory4

(Prerequisite: ENG 0950 + MATH 0930 + RDG 0950; or appropriate placement scores, see page 12of the CNM catalog; HLTH 1001 or department approval; PHLB 1010 or department approval; PHLB 1090 or department approval; PHLB 1092 or department approval. Corequisite: MLT 1007 + CLA 1092 + CLA 1590)

Introduces principles and methodology of physical, chemical, and microscopic analysis of urine as well as basic theories and methodology related to hematology, coagulation, clinical chemistry, immunology, and clinical microbiology.

CLA 1092 – Basic Clinical Laboratory Techniques1

(Corequisite: MLT 1007 + CLA 1012 + CLA 1590)

Students will view demonstrations of laboratory techniques and procedures and interactively participate in activities related to urinalysis, hematology, coagulation, clinical chemistry, immunology, and clinical microbiology laboratory procedures and practices.

(45 lab hours per term)

ELEC – Electronics Applied Technologies

ELEC 100 – Survey of Adv. Technologies Career Pathways1

Overview of the Advanced/Emerging Technologies Industry: Sectors, Jobs, Technology and Trends.

ELEC 1004 – DC and AC Circuits4

(Pre- or corequisite: ELEC 1010 + ELEC 1092)

This course covers the basic concepts of DC and AC electronics with emphasis on Ohm's Law, Kirchhoff's Law, power, magnetism and electromagnetism, with emphasis on circuit analysis, component application and troubleshooting. Construct circuits from schematic diagrams and use of multimeters, oscilloscopes, function generators and power supplies in the lab to support concepts taught in class. Introduction and use of circuit simulation software (Multisim[®]) to build, simulate, test, and troubleshoot fundamental electronic circuits.

ELEC 1022 – Soldering Standards2

Industry standard soldering techniques for high reliability connections. Soldering certification is covered. (15 theory + 45 lab hours per term)

ELEC 1092 – DC and AC Circuits Lab2

(Pre- or corequisite: ELEC 1004)

Laboratory exercises designed to reinforce the concepts from ELEC 1004.

(90 lab hours per term)

ELEC 1101 – Digital Circuit Concepts & Design3

(Corequisite: ELEC 1192)

Covers the fundamentals of Digital logic, and FPGAs. Building/ troubleshooting digital electronics devices and circuits with emphasis on components using the FPGA and VHDL coding. Project Design, Synthesis, Behavioral Simulation, and Configuration of Hardware Devices are the main processes of the class to program digital gates, combinational logic circuits, and basic digital devices (counters, shift registers, DAC, etc.)

ELEC 1192 – Digital Circuit Concepts & Design Lab2

(Corequisite: ELEC 1101)

Laboratory exercise designed to reinforce the concepts from ELEC 1101.

(90 lab hours per term)

ELEC 120 – Semiconductor/Solid State Devices.....4

(Prerequisite: ELEC 1004 + ELEC 1010 + ELEC 1092. Corequisite: ELEC 1292)

This course will cover the following components/devices and their applications: Diodes, Transistors, Operational Amplifiers, MOSFETs, Integrated Circuits, Switching Power Supplies, DC-DC Converters, Inverters. Includes measurement, conversion/control, troubleshooting electronic circuits with emphasis on Integrated Circuits.

ELEC 1292 – Semiconductor/Solid State Devices Lab2

(Corequisite: ELEC 1201)

Laboratory exercise designed to reinforce the concepts from ELEC 1201.

(90 lab hours per term)

ELEC 1301 – Electromechanical Devices & Systems3

(Prerequisite: ELEC 1201 + ELEC 1292. Corequisite: ELEC 1392) Presents theory and application of mechanical devices and their control circuits. Includes hydraulics, pneumatics, PLCs, AC and DC and VFD motors, stepper motors and servomechanisms. Students design, assemble, operate and troubleshoot electromechanical systems.

ELEC 1392 – Electromechanical Devices & Systems Lab4

(Pre- or corequisite: ELEC 1301)

Laboratory exercise designed to reinforce the concepts from ELEC 1301.

(180 lab hours per term)

ELEC 1401 – Telecommunications Circuits & Systems3

(Prerequisite: ELEC 1201 + ELEC 1301. Corequisite: ELEC 1492) This course covers tuned amplifiers, oscillators, optoelectronic devices, AM/FM & Single-Sideband communications. Coding techniques, Transmission lines, Antennas, Waveguides and RADAR, Television.

ELEC 1492 – Telecommunications Circuits & Systems Lab2

(Corequisite: ELEC 1401)

Laboratory exercise designed to reinforce the concepts from ELEC 1401.

(90 lab hours per term)

ELEC 2040 – Systems Simulation3 (*Prerequisite: ELEC 1301 + ELEC 1392 + ELEC 2010*)

Electronics Test Equipment and Systems, Block Diagram & Signal Flow Analysis. Use of Simulation Software to teach design and troubleshooting. (30 theory + 45 lab hours per term)

ELEC 2999 – Capstone......2

(Prerequisite: ELEC 1401 + ELEC 1492 + ELEC 2010)

Capstone projects course.

(15 theory + 45 lab hours per term)

ESOL – English for Speakers of Other Languages **Adult and General Education**

ESOL 0450 – English Language Skills for College Communication3

(Recommended prerequisite: Completion of Adult Basic Education ESL 0650)

Provides speakers of other languages the opportunity to develop language and self-advocacy skills for success in college and the

(45 theory + 15 lab hours per term)

ESOL 0551 – Basic Reading/Writing Skills for Speakers of Other Languages3

(Recommended prerequisite: Completion of CNM's Adult Basic Education ESL Program+ ESOL 0450. Prerequisite: Accuplacer Reading score between 0-58 + Accuplacer Sentence Skills score between 0-52 or equivalent, see page 12 of the CNM Catalog.)

Provides speakers of other languages the opportunity to develop academic language skills. Students practice reading strategies, improve their sentence and paragraph skills in organized pieces of writing, use computers for word processing and research, practice oral language skills, and improve English language usage.

(45 theory + 15 lab hours per term)

ESOL 0751 – Practical Writing for Speakers of Other Languages3

(Prerequisite: ENG 0550 or ESOL 0551 or appropriate placement scores, see page 12 of the CNM Catalog.)

Provides speakers of other languages the opportunity to complete writing tasks related to daily life, school, and the workplace to achieve a variety of practical and academic goals. Presents English grammar, usage, and punctuation in the context of the students' own writing. (45 theory + 15 lab hours per term)

(Prerequisite: ENG 0750 or ESOL 0751 or appropriate placement scores, see page 12 of the CNM Catalog.)

Prepares speakers of other languages for first-year college composition by providing practice of the rhetorical and grammatical skills necessary to write purposeful, reader-centered essays. Covers effective use of a writing process in out-of-class essays and in timed, in-class situations. Incorporates readings for discussion of ideas and for information to be used in students' writing.

(45 theory + 15 lab hours per term)

FITT - Fitness Health, Wellness and Public Safety

FITT 1096, 1196...1996 – Special Topics...... 1-6

(all courses ending in 96 are topics courses) (italics) Previously FITT 196 (Prerequisite: department approval) Presents current topics in fitness.

GEOG - Geography Math, Science and Engineering

GEOG 1192 – Physical Geography Lab1

(Pre- or corequisite: GEOG 1101)

This laboratory course introduces the physical elements of world geography and the study of climate and weather, vegetation, soils, plate tectonics, various landforms, the environmental cycles and the spatial distributions of these components through the use of maps, aerial photographs, and laboratory specimens. (45 lab hours per term)

LAND - Landscaping Applied Technologies

LAND 1121 – Plant Science3

(Prerequisite: MATH 0550 or appropriate placement score, see page 12 of the CNM Catalog, or department approval.)

Introduces the fundamental principles of Horticulture. Covers plant nomenclature, plant classification, plant processes, propagation techniques, plant physiology, plant pathology and various uses of plant materials. (30 Theory + 37.5 Lab hours per term)

LAND 1221 – Soil Science......3

(Prerequisite: MATH 0550 or appropriate placement score, see page 12 of the CNM Catalog, or department approval.)

Introduces soil formation, physical, chemical and biological properties, soil, water and air, soil fertility and plant nutrition with an emphasis on water conservation. (30 Theory + 37.5 Lab hours per term)

LAND 1321 – Comprehensive Irrigation Techniques2

(Prerequisite: MATH 0550 or appropriate placement score, see page 12 of the CNM Catalog, or department approval.)

Introduces irrigation system hydraulics, component identification, assembly, diagnostics, maintenance and repair with emphases on water conservation, system performance and safety. (15 Theory + 37.5 Lab hours per term)

LAND 1421 – Weed & Pest Control3

(Prerequisite: MATH 0550 or appropriate placement score, see page 12 of the CNM Catalog, or department approval.)

Introduces fundamental principles of Landscape Pest Management. Covers pest classification, identification and management principles; plant physiology and pathology, laws, chemical handling, and safety issues with emphases on environmental responsibility and stewardship. (30 Theory + 37.5 Lab hours per term)

LAND 1701 – Crew Leadership......2

(Prerequisite: MATH 0550 or appropriate placement score, see page 12 of the CNM Catalog, or department approval.)

Introduces basic crew leadership skills including construction industry and organizations, team building, gender and minority issues, communication, motivation, problem solving, decision making, site safety and project control.

LAND 2110 – Landscape Construction......3

(Prerequisite: MATH 0550 or appropriate placement score, see page 12 of the CNM Catalog, or department approval.)

Covers basic instruction in landscape construction techniques and materials and the safe operation and maintenance of power equipment commonly used in landscaping construction.

(30 Theory + 37.5 Lab hours per term)

(Prerequisite: MATH 0550 or appropriate placement score, see page 12 of the CNM Catalog, or department approval.)

Includes basic instruction in landscape maintenance techniques and the safe operation and maintenance of power equipment commonly used in the landscaping industries.

(30 Theory + 37.5 Lab hours per term)

LAND 2130 – Light Truck & Trailer Operation2

(Prerequisite: MATH 0550 or appropriate placement score, see page 12 of the CNM Catalog, or department approval.)

Introduces light truck and trailer driving techniques, licensing requirements, evaluation of load/towing capacity, inspection of towing combinations, securing of cargo, loading and unloading, coupling and uncoupling of light duty trailers.

(15 Theory + 37.5 Lab hours per term)

LAND 2140 – Construction Equipment Safety & Fundamentals.....2

(Prerequisite: MATH 0550 or appropriate placement score, see page 12 of the CNM Catalog, or department approval.)

Provides an overview of equipment operation, operator responsibilities and career opportunities. Includes basic principles of safety, engine operation, OSHA/NIOSH requirements, identification of equipment and basic operational techniques.

LAND 2150 – Effective Irrigation Scheduling3

(Prerequisite: MATH 0550 or appropriate placement score, see page 12 of the CNM Catalog, or department approval.)

Presents principles and techniques of competent irrigation auditing and scheduling utilizing generally accepted industry standards.

MLT - Medical Lab Technician **Health Wellness and Public Safety**

MLT 1007 – Clinical Success Seminar......1

This course prepares the student for success in the academic and clinical settings with topics including; learning skills, online success, clinical preparation and employer expectations, professional and interpersonal communication, legal and ethical considerations, and medical laboratory operations.

NUTR - Nutrition Math, Science and Engineering

NUTR 1015 – Introduction to Medical Nutrition Therapy......3

(Pre- or corequisite: NUTR 1010)

This course explores the fundamentals of medical nutrition therapy for various symptoms and disease states. It is intended for students enrolled in the Dietary Manager program.

NUTR 1020 – Introduction to Sports Nutrition3

(Prerequisite: ENG 0950 + RDG 0950 + MATH 0930 or appropriate placement scores, see page 12 of the CNM Catalog)

This course will explore the role of nutrition in physical performance of competitive and recreational sports participants. This course can be used in place of FITT 1570 for the Fitness Technician program.

NUTR 1090 – Dietary Manager Internship I......2

(Pre- or corequisite: CULN 1101 or HT 1101; CULN1103 + NUTR 1010 + NUTR 1015 + department approval)

Provides a learning experience in a healthcare facility with emphasis on developing skills in Nutrition/Medical Nutrition Therapy and Sanitation/Food Safety. This is an unpaid work experience requiring a minimum of 90 hours.

(90 lab hours per term)

NUTR 1091 – Dietary Manager Internship II

(Pre- or corequisite: CULN 1010 or CULN 1111;

HT 2201 + department approval)

Provides a learning experience in a healthcare facility with emphasis on developing skills in Nutrition/Medical Nutrition Therapy and Sanitation/Food Safety. This is an unpaid work experience requiring a minimum of 90 hours.

(90 lab hours per term)

PHOT – Photonics Applied Technologies

PHOT 1010 – Fiber Optics......3

(Prerequisite: PHOT 1001)

Presents optical wave-guides and fibers as well as Fiber Optics Telecommunication. The course covers basic fiber optics components and active devices such as detectors for fiber optic systems, isolators, attenuators, circulators, couplers, cables, connectors, switches, pump lasers, transmission systems and repeaters.

(15 Theory + 90 Lab hours per term)

PHOT 2999 – Capstone3

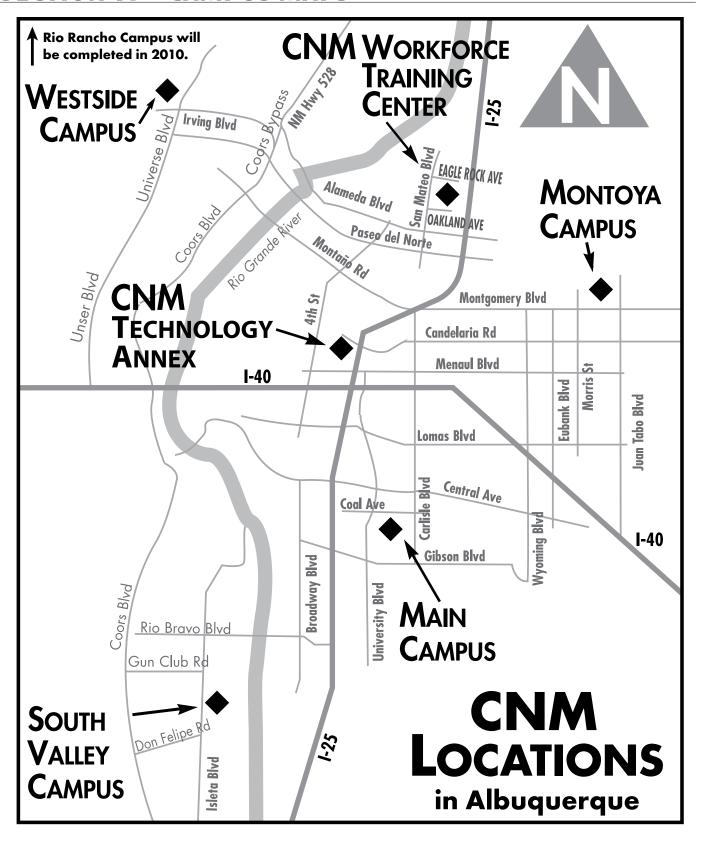
(Pre- or corequisite: PHOT 2020)

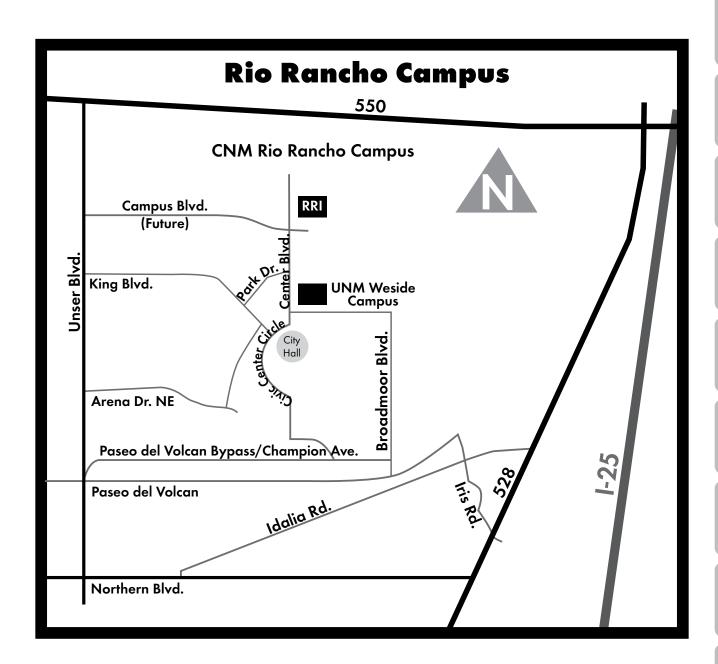
Capstone projects course.

(135 Lab hours per term)



SECTION VI – CAMPUS MAPS

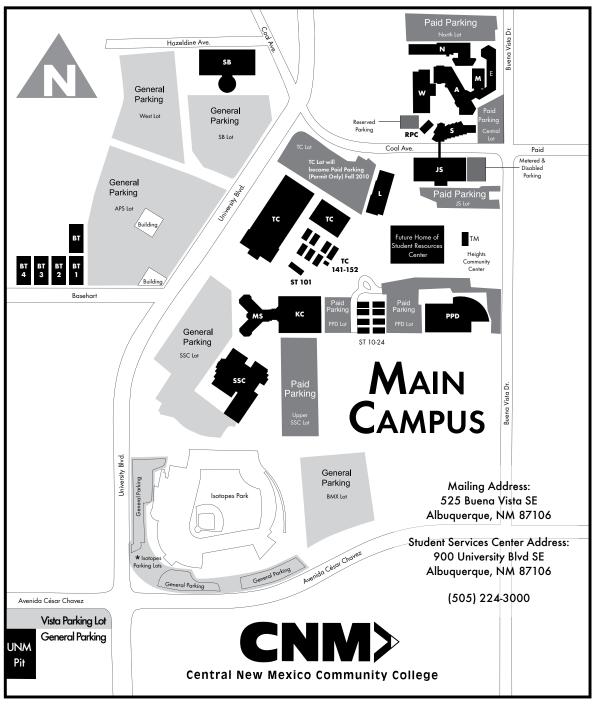




RIO RANCHO CAMPUS OPENING FALL 2010

CNM RIO RANCHO CAMPUS

2601 Campus Blvd. NE Rio Rancho, NM 87144



A: Administration Building BT 1-4: Basehart Temporaries

E: East Building

JS: Jeannette Stromberg Hall

KC: Ken Chappy Hall

L: Science Laboratory Building

M: Main BuildingMS: Max Salazar HallN: North Building

PPD: Support Services/Physical Plant RPC: Records & Property Control S: South Building

SB: Smith Brasher Hall
SSC: Student Services Center

ST: South Temporary Buildings

TC: Ted Chavez Hall

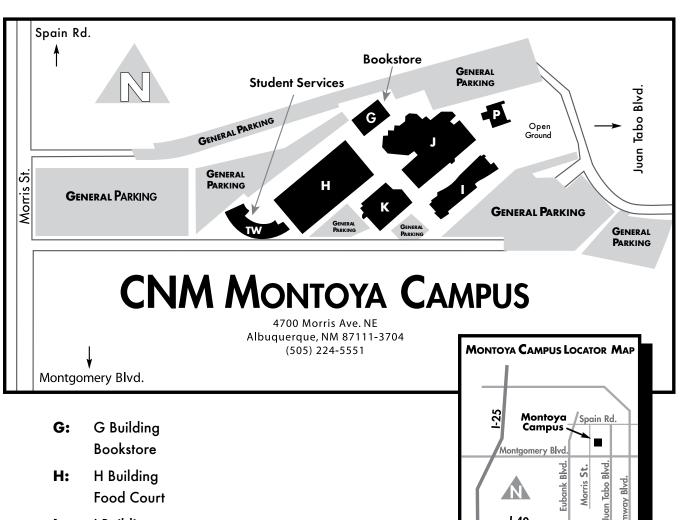
TM: Tres Manos Child Development Center

W: West Building

Note: General parking is free. Students and employees must register their vehicles so security officers can contact them if there are any parking problems. Forms can be picked up at the Student Services Center or at the Parking Services Administrative Office in the PPD

Tramway Blvd.

I-40

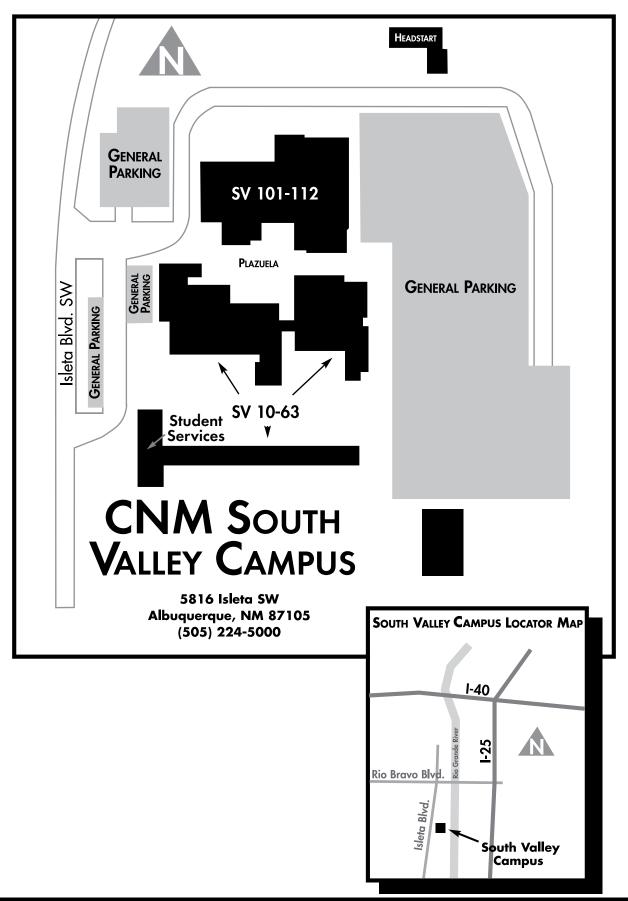


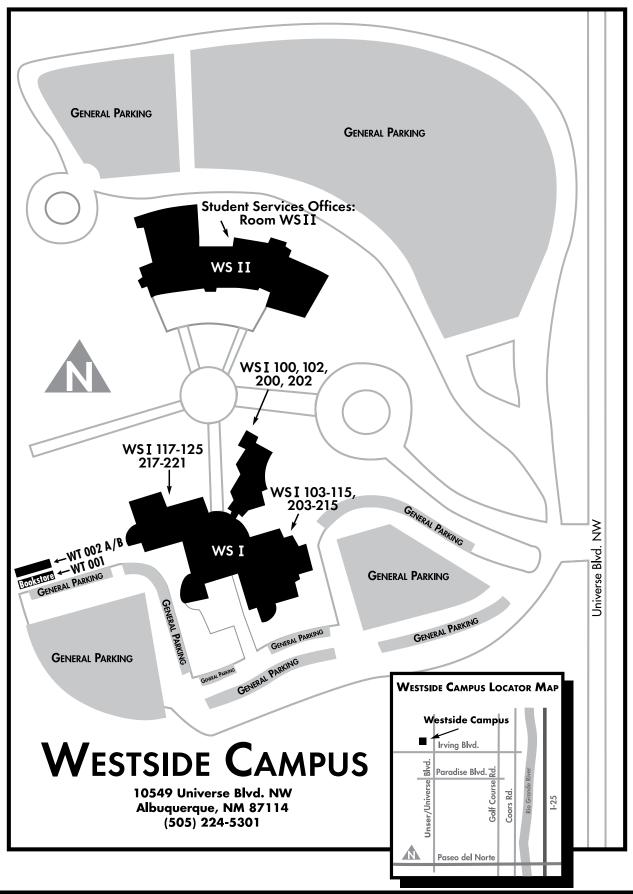
- H Building H: **Food Court**
- I: I Building
- J Building J: CNM Library J-123

Math Assistance Learning Lab J-102

Tutoring Center J-107

- K: K Building
- P: P Building (Maintenance)
- TW: Tom Wiley Hall











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