

Fast-Track Student Admission

The Fast-Track Program enables outstanding undergraduate UTEP students to receive both undergraduate and graduate credit for up to 15 hours of UTEP course work as determined by participating Master's and Doctoral programs. Not all undergraduate programs have elected to participate in the Fast Track option, so students should see their departmental graduate advisor for information about requirements and guidelines.

Application Requirements

1. This program is intended for UTEP students who are interested in transitioning from a bachelor's degree to a graduate degree. A student who has previously earned a bachelor's degree may not apply to this program.
2. To be considered for the Fast Track Program, students need to complete a Graduate School application. Once the Graduate School clears the application based on the recommendations of the intended graduate program, students will be assigned a fast track code until the bachelor's degree is conferred. The student will be subsequently admitted as a new student in the graduate program.
3. Students must have successfully completed at least 90 hours of undergraduate coursework toward their major with a minimum of 24 of those hours at UTEP.
4. Students must have and maintain the same GPA requirement in the major as for the university honor's certificate, which is an undergraduate GPA of GPA equal or greater than 3.30.
5. Participating graduate programs may have additional requirements including specific GRE scores and undergraduate coursework preparation.

Program Guidelines

1. Each participating graduate academic program will determine which graduate-level courses will be included in the Fast Track. The Graduate School will maintain an inventory of all approved courses.
2. Students must be advised each semester at the departmental level by both the undergraduate and graduate advisors and cleared for registration in graduate courses by the Graduate School.
3. Undergraduate students must earn a B or better in the graduate course for it to count as graduate credit. If the grade is a C, it will not count toward the graduate degree but the credit hours will still count toward the undergraduate degree. The earned grade will not be calculated in the undergraduate GPA and will show on the undergraduate transcript as a transfer. These graduate course grades should not be used for determination of undergraduate honors or other academic awards at the Bachelor's level.
4. When the student graduates with the Bachelor's degree, the graduate courses will be shown in the undergraduate transcript, and if a grade of C or better is attained, count toward the undergraduate degree. The courses will also show on the graduate transcript as graduate courses, but in these cases will be calculated into the graduate GPA.
5. Tuition will be based on the level of the course, not on the level of the student. Financial aid may be adjusted.
6. Exceptions to these guidelines will be handled through an appeal process established by the participating graduate program.

The following courses have been approved for possible use in this program. However, students participating in this program must obtain approval from his/her advisor before enrolling in the courses listed below:

Any M.S. degree in the Biological Sciences department/Any Undergraduate degree implemented by the Biological Sciences Department

Code	Title	Hours
BIOL 5130	Seminar	1
BIOL 5131	Ethical, Soc/Pol Dimensions	1
BIOL 5301	Select Adv Topics Biol Science	3
BIOL 5305	Herpetology	3
BIOL 5308	Rsrch Funding & Prof Developmt	3
BIOL 5313	Biogeography	3
BIOL 5316	Biosystematics	3
BIOL 5322	Advances/Evolutionary Theory	3
BIOL 5326	Advances Immunological Concept	3
BIOL 5327	Advances in Ecological Theory	3
BIOL 5328	Biostatistics	3
BIOL 5329	Physiology of Bacterial Cell	3
BIOL 5340	Structure/Funct Macromolecules	3
BIOL 5344	Molecular Pathogenesis	3
BIOL 5351	Intro Bio I:Basic Seq. Comp.	3

BIOL 5352	Intro Bio II: Gene Find/Compar	3
BIOL 5360	Aquatic Ecology	3

M.A. in English and American Literature (<http://catalog.utep.edu/grad/college-of-liberal-arts/english/english-american-literature-ma/>) / B.A. in English and American Literature

Code	Title	Hours
ENGL 5300	Approach-Methods & Bibliog.	3
ENGL 5320	Critical Theory and Practice	3

M.A. in English-Rhetoric and Writing Studies (<http://catalog.utep.edu/grad/college-of-liberal-arts/english/english-rhetoric-writing-studies-ma/>) / Minor in English: Rhetoric/Writing Studies

Code	Title	Hours
RWS 5309	Intro to Rhetoric & Writing St	3
RWS 5311	Persuasion and Argument	3
RWS 5312	Technical Writing	3
RWS 5313	Grant Writing	3
RWS 5314	Multimodal Composing	3
RWS 5315	Prof Writing & Rhetoric	3

M.A. in Bilingualism and Applied Linguistics (<http://catalog.utep.edu/grad/college-of-liberal-arts/languages-linguistics/linguistics-ma/>) / B.A. in Linguistics and Bilingualism

Code	Title	Hours
LING 5301	Principles of Ling Analysis	3
LING 5310	Pedagogical Issues in Engl Str	3
LING 5331	Teaching Second Lang Comp	3
LING 5348	Second Language Acquisition	3
LING 5370	Study in Language	3
LING 5388	Bilingualism	3

M.A. in Philosophy (<http://catalog.utep.edu/grad/college-of-liberal-arts/philosophy/philosophy-ma/>) / B.A. in Philosophy

Code	Title	Hours
PHIL 5301	Philosophy of Law & Society	3
PHIL 5303	Ethics and Engineering	3
PHIL 5304	Science and Ethics	3
PHIL 5305	Philosophical Rsrch & Writing	3
PHIL 5351	World Historical Philosophers	3
PHIL 5352	Basic Philosophical Issues	3
PHIL 5354	Topics in Philosophy/History	3
PHIL 5356	Topics in Philosophy of Scienc	3

M.A. in Political Science (<http://catalog.utep.edu/grad/college-of-liberal-arts/political-science/political-science-ma/>)/B.A. in Political Science

Code	Title	Hours
POLS 5300	Sem In Quant Rsrch Methods I	3
POLS 5301	Sem in Qual Resrch Methods	3
POLS 5302	Sem Quant Research Methods II	3
POLS 5310	Seminar in Am. Pol. Behavior	3
POLS 5313	Seminar-Political Communicatio	3
POLS 5315	Sem. In Am. Inst. & Proc.	3
POLS 5320	Seminar In Public Law	3
POLS 5330	Seminar-International Politics	3
POLS 5331	Semina-Intn'l Organ/Intn'l Law	3
POLS 5332	Sem-Foreign Policy Dec Making	3
POLS 5334	Seminar-Comparative Pol. Dev.	3

POLS 5338	Sem. In Int. Pol. Econ.	3
POLS 5339	Sem. Comp. Pol. Institutions	3
POLS 5343	Seminar in Border Politics	3
POLS 5345	Comparative Electoral Systems	3
POLS 5346	Sem in Pol Econ of Developmt	3
POLS 5347	Sem in International Security	3
POLS 5348	Sem in Politics of Latin Amer	3
POLS 5364	Seminar-Public Policy Analysis	3
POLS 5368	Seminar in Conflict Analysis	3

M.A. in Sociology (<http://catalog.utep.edu/grad/college-of-liberal-arts/sociology-anthropology/sociology-ma/>) / B.A. in Anthropology

Code	Title	Hours
SOCI 5311	Prof Development in Sociology	3
SOCI 5312	Sem-Advanced Measure/Inference	3
SOCI 5320	Seminar in Research Methods	3
SOCI 5322	Seminar in Qualitative Methods	3
SOCI 5328	Social Theory	3
SOCI 5340	Seminar - Demography	3
SOCI 5341	Special Graduate Topics	3
SOCI 5348	Seminar-Criminology	3
SOCI 5355	US-Mexico Borderlands in Chang	3
SOCI 5365	Seminar-Sociology of Education	3

M.A. in Teaching English (<http://catalog.utep.edu/grad/college-of-liberal-arts/english/teaching-english-master-of-arts/>) / B.A. in English or B.A. English and American Literature

Code	Title	Hours
ENGL 5339	Intro to Secondary English	3
ENGL 5340	Literature for Youth	3
ENGL 5341	Eng Studies in the Borderlands	3
ENGL 5342	Digital Lit and the Lang Arts	3
ENGL 5344	Integrated Teaching Methods	3
ENGL 5345	Writing to Learn	3
ENGL 5380	Special Topics in English Ed	3

M.B.A. - Master of Business Administration (<http://catalog.utep.edu/grad/college-of-business-administration/business-administration-deans-office/master-of-business-administration/>) / B.B.A in Finance

Code	Title	Hours
BLAW 5306	Business Law and Ethics	3
ECON 5311	Managerial Economics	3
FIN 5311	Financial Management	3
FIN 5315	Securities Analysis	3
FIN 5316	Risk Mgmt and Derivative Mkts	3
FIN 5325	International Financial Mgmt	3
MGMT 5311	Organizational Mgmt Seminar	3
MKT 5311	Marketing Management	3
OSCM 5308	Concepts of Production Mgmt	3
QMB 5311	Quantitative Methods-Business	3

M.B.A. - Master of Business Administration (<http://catalog.utep.edu/grad/college-of-business-administration/business-administration-deans-office/master-of-business-administration/>) / B.B.A General Business (concentration in General Business)

Code	Title	Hours
BLAW 5306	Business Law and Ethics	3
ECON 5311	Managerial Economics	3
FIN 5311	Financial Management	3
OSCM 5308	Concepts of Production Mgmt	3
MGMT 5311	Organizational Mgmt Seminar	3
MKT 5311	Marketing Management	3
QMB 5311	Quantitative Methods-Business	3

M.B.A. - Master of Business Administration (<http://catalog.utep.edu/grad/college-of-business-administration/business-administration-deans-office/master-of-business-administration/>) / B.S. in Biomedical Sciences

Code	Title	Hours
ACCT 5304	Accounting Analysis	3
BLAW 5306	Business Law and Ethics	3
ECON 5311	Managerial Economics	3
FIN 5311	Financial Management	3
MGMT 5311	Organizational Mgmt Seminar	3
MKT 5311	Marketing Management	3
QMB 5311	Quantitative Methods-Business	3
OSCM 5308	Concepts of Production Mgmt	3

M.B.A. - Master of Business Administration (<http://catalog.utep.edu/grad/college-of-business-administration/business-administration-deans-office/master-of-business-administration/>) / B.S. in Ecology and Evolutionary Biology

Code	Title	Hours
ACCT 5304	Accounting Analysis	3
BLAW 5306	Business Law and Ethics	3
ECON 5311	Managerial Economics	3
FIN 5311	Financial Management	3
MGMT 5311	Organizational Mgmt Seminar	3
MKT 5311	Marketing Management	3
QMB 5311	Quantitative Methods-Business	3
OSCM 5308	Concepts of Production Mgmt	3

M.B.A. - Master of Business Administration (<http://catalog.utep.edu/grad/college-of-business-administration/business-administration-deans-office/master-of-business-administration/>) / B.S. in Geological Sciences

Code	Title	Hours
ACCT 5304	Accounting Analysis	3
BLAW 5306	Business Law and Ethics	3
ECON 5311	Managerial Economics	3
FIN 5311	Financial Management	3
MGMT 5311	Organizational Mgmt Seminar	3
MKT 5311	Marketing Management	3
QMB 5311	Quantitative Methods-Business	3
OSCM 5308	Concepts of Production Mgmt	3

M.B.A. - Master of Business Administration (<http://catalog.utep.edu/grad/college-of-business-administration/business-administration-deans-office/master-of-business-administration/>) / B.S. in Mathematical Sciences (Applied Mathematics Concentration)

Code	Title	Hours
ACCT 5304	Accounting Analysis	3
BLAW 5306	Business Law and Ethics	3

ECON 5311	Managerial Economics	3
FIN 5311	Financial Management	3
MGMT 5311	Organizational Mgmt Seminar	3
MKT 5311	Marketing Management	3
QMB 5311	Quantitative Methods-Business	3
OSCM 5308	Concepts of Production Mgmt	3

M.B.A. - Master of Business Administration (<http://catalog.utep.edu/grad/college-of-business-administration/business-administration-deans-office/master-of-business-administration/>) / B.S. in Mathematical Sciences (Data Science Concentration)

Code	Title	Hours
ACCT 5304	Accounting Analysis	3
BLAW 5306	Business Law and Ethics	3
ECON 5311	Managerial Economics	3
FIN 5311	Financial Management	3
MGMT 5311	Organizational Mgmt Seminar	3
MKT 5311	Marketing Management	3
QMB 5311	Quantitative Methods-Business	3
OSCM 5308	Concepts of Production Mgmt	3

M.B.A. - Master of Business Administration (<http://catalog.utep.edu/grad/college-of-business-administration/business-administration-deans-office/master-of-business-administration/>) / B.S. in Mathematical Sciences

Code	Title	Hours
ACCT 5304	Accounting Analysis	3
BLAW 5306	Business Law and Ethics	3
ECON 5311	Managerial Economics	3
FIN 5311	Financial Management	3
MGMT 5311	Organizational Mgmt Seminar	3
MKT 5311	Marketing Management	3
QMB 5311	Quantitative Methods-Business	3
OSCM 5308	Concepts of Production Mgmt	3

M.B.A. - Master of Business Administration (<http://catalog.utep.edu/grad/college-of-business-administration/business-administration-deans-office/master-of-business-administration/>) / B.S. in Microbiology

Code	Title	Hours
ACCT 5304	Accounting Analysis	3
BLAW 5306	Business Law and Ethics	3
ECON 5311	Managerial Economics	3
FIN 5311	Financial Management	3
MGMT 5311	Organizational Mgmt Seminar	3
MKT 5311	Marketing Management	3
QMB 5311	Quantitative Methods-Business	3
OSCM 5308	Concepts of Production Mgmt	3

M.B.A. - Master of Business Administration (<http://catalog.utep.edu/grad/college-of-business-administration/business-administration-deans-office/master-of-business-administration/>) / B.S. in Physics - Applied Physics Concentration

Code	Title	Hours
ACCT 5304	Accounting Analysis	3
BLAW 5306	Business Law and Ethics	3
ECON 5311	Managerial Economics	3
FIN 5311	Financial Management	3
MGMT 5311	Organizational Mgmt Seminar	3
MKT 5311	Marketing Management	3

QMB 5311	Quantitative Methods-Business	3
OSCM 5308	Concepts of Production Mgmt	3

M.Ed. - Curriculum & Instruction (<http://catalog.utep.edu/grad/college-of-education/teacher-education/med-instructional-specialist/>) / B.S. in Education; B.A. in Psychology; B.A. in Sociology, B.A. in Spanish, B.A. in English, B.B.A in General Business; B.S. in Mathematical Sciences; B.S. in Physics

Code	Title	Hours
TED 5300	Research for Classroom Teacher	3
TED 5304	Scholarly Writing for Educ	3

M.Ed. - Educational Diagnostician (<http://catalog.utep.edu/grad/college-of-education/educational-psychology-special-services/med-educational-diagnostician/>) / B.S. in Education with a Concentration in Studies Special Education

Code	Title	Hours
EDPC 5334	Classroom Based Appraisal	3
SPED 5350	Special Topics-Special Educati	3
SPED 5371	Interv. Stud w/ Low Incid Dis	3

M.Ed. - Special Education (<http://catalog.utep.edu/grad/college-of-education/educational-psychology-special-services/med-special-education/>) / B.S. in Education

Code	Title	Hours
EDPC 5334	Classroom Based Appraisal	3
SPED 5345	Interv Stud w/High Incid Disab	3
SPED 5351	CurTop in Early Interv (B-8)	3
SPED 5352	Behav Inter for Young Ch (B-8)	3
SPED 5353	Earl Interv Strat Spe Pop B-8	3
SPED 5354	Atypical Childh Develop (B-8)	3
SPED 5369	Tch Rdng Wrt Mth/Lrms Hgh Inc	3

M.S. in Bioinformatics (<http://catalog.utep.edu/grad/college-of-science/college-science-deans-office/bioinformatics-ms/>) / B.S. in Biomedical Sciences; B.S. in Microbiology

Code	Title	Hours
BINF 5351	Intro. Bioinformatics I	3
BINF 5352	Intro. Bioinformatics II	3
BIOL 5351	Intro Bio I:Basic Seq. Comp.	3
BIOL 5352	Intro Bio II: Gene Find/Compar	3
BIOL 5316	Biosystematics	3
BIOL 5326	Advances Immunological Concept	3
BIOL 5329	Physiology of Bacterial Cell	3
BIOL 5340	Structure/Funct Macromolecules	3
BIOL 5344	Molecular Pathogenesis	3

M.S. in Bioinformatics (<http://catalog.utep.edu/grad/college-of-science/college-science-deans-office/bioinformatics-ms/>) / B.S. in Chemistry

Code	Title	Hours
BINF/CHEM 5341	Anal./Model of Bio Structures	3
CHEM 5321	Advanced Organic Chemistry I	3
CHEM 5322	Advanced Organic Chemistry II	3
CHEM 5329	Contem Topics Organic Chemistr	3
CHEM 5339	Contemp Topics in Biochemistry	3

M.S. in Bioinformatics (<http://catalog.utep.edu/grad/college-of-science/college-science-deans-office/bioinformatics-ms/>) / B.S. in Computer Science

Code	Title	Hours
CS 5334	Parallel & Concurrent Program	3
CS 5341	Advanced Computer Architecture	3

CS 5350	Advanced Algorithms	3
CS 5351	Interval Computations	3

M.S. in Bioinformatics (<http://catalog.utep.edu/grad/college-of-science/college-science-deans-office/bioinformatics-ms/>) / B.S. in Mathematics

Code	Title	Hours
BINF/STAT 5354	Post-Genomic Analysis	3
MATH 5330	Comp Methods of Linear Algebra	3
MATH 5335	Techniques in Optimization	3
STAT 5329	Statistical Programming	3
STAT 5428	Intro to Statistical Analysis	4

M.S. in Biomedical Engineering (<http://catalog.utep.edu/grad/college-of-engineering/metallurgical-materials-engineering/20biomedical-engineering-ms/>) / B.S. Biomedical Sciences; B.S. in Cellular and Molecular Biochemistry; B.S. in Microbiology

Code	Title	Hours
BIOL 5301	Select Adv Topics Biol Science *	3
BIOL 5308	Rsrch Funding & Prof Developmt	3
BIOL 5311	Neurobiology of Brain Diseases	3
BIOL 5320	Endocrinology	3
BIOL 5330	Cancer Biology	3
BME 5301	BME for Global Health	3
BME 5302	Telemedicine & Imaging Info.	3
BME 5303	Research & Lab Methods	3
BME 5304	BME Device Design & Regulation	3
BME 5310	Biomaterials	3
BME 5313	Tissue Engineering	3
BME 5321	Biomechatronics	3
BME 5390	Special Topics in BME	3

* Advisor approval needed

M.S. in Biomedical Engineering (<http://catalog.utep.edu/grad/college-of-engineering/metallurgical-materials-engineering/20biomedical-engineering-ms/>) / B.S. in Metallurgical and Materials Engineering

Code	Title	Hours
BME 5301	BME for Global Health	3
BME 5302	Telemedicine & Imaging Info.	3
BME 5303	Research & Lab Methods	3
BME 5304	BME Device Design & Regulation	3
BME 5310	Biomaterials	3
BME 5313	Tissue Engineering	3
BME 5321	Biomechatronics	3
BME 5390	Special Topics in BME	3
MME 5390	Special Topics	3

M.S. in Chemistry (<http://catalog.utep.edu/grad/college-of-science/chemistry/chemistry-ms/>) / B.S. in Chemistry

Code	Title	Hours
CHEM 5322	Advanced Organic Chemistry II	3
CHEM 5351	Advanced Physical Chemistry I	3

M.S. in Civil Engineering (<http://catalog.utep.edu/grad/college-of-engineering/civil-engineering/civil-engineering-ms/>); **M.S. in Environmental Engineering** (<http://catalog.utep.edu/grad/college-of-engineering/civil-engineering/environmental-engineering-ms/>); **M.E. in Civil and Environmental Engineering / B.S. in Civil Engineering**

Code	Title	Hours
CE 5302	Grndwtr Hydro & Polltn	3
CE 5304	Adv Design of Struct Systms	3
CE 5305	Advanced Structural Analysis	3
CE 5307	Finite Element Method	3
CE 5310	Risk/Reliability Anal-Engr Sys	3
CE 5312	Environmental Processes	3
CE 5317	Stats Methods for Civil Eng	3
CE 5318	Bridge Engineering	3
CE 5320	Advanced Geotechnical Eng.	3
CE 5323	Prestressed Concrete	3
CE 5325	Design for Dynamic Loads	3
CE 5326	Air Pollution Control	3
CE 5332	Methods Engineering Computatio	3
CE 5344	Biol Unit Operations/Processes	3
CE 5345	Adv Phy-Chem Water Treat	3
CE 5349	Design-Filtrat'n/Membrane Proc	3
CE 5351	Mech Pavement Design/Analysis	3
CE 5352	Foundation Design II	3
CE 5353	Geotech. Site Investigation	3
CE 5355	Advanced Civil Eng. Materials	3
CE 5356	Sustainable Engr Design	3
CE 5357	Structural Loads Models	3
CE 5358	Traffic Engineering	3
CE 5359	Foundation Design I	3
CE 5360	Highway Geometric Design	3
CE 5361	Traffic Flow/Simulat Modeling	3
CE 5362	Urban Transportation Planning	3
CE 5365	Infrastrct Syst Design & Eval	3
CE 5390	Special Topics Civil Engr	3
CE 5391	Individual Studies	3
CE 5409	Environmental Eng Chemistry	4
SC 5301	Fundamentals of Smart Cities	3
SC 5302	Smart Cities Design	3

M.S. in Computer Science (<http://catalog.utep.edu/grad/college-of-engineering/computer-science/computer-science-ms/>); **M.S. in Artificial Intelligence** (<http://catalog.utep.edu/grad/college-of-engineering/computer-science/ms-data-information-sciences/>); **Graduate Certificate in Cyber Security** (<http://catalog.utep.edu/grad/college-of-engineering/computer-science/cyber-security-graduate-certificate/>); **M.S. in Engineering** (<http://catalog.utep.edu/grad/college-of-engineering/engineering-education-leadership/engineering-ms/>); **Ph.D. in Computer Science** (<http://catalog.utep.edu/grad/college-of-engineering/computer-science/computer-science-phd/>) (Software Engineering Track) / **B.S. in Computer Science**

Code	Title	Hours
CS 5303	Logical Foundations of CS	3
CS 5313	Computer Networks	3
CS 5314	Decision Making	3
CS 5315	Theory of Computation	3
CS 5317	Human-Computer Interaction	3
CS 5319	Topics in Language Processing	3
CS 5323	Wireless Networks	3
CS 5334	Parallel & Concurrent Program	3

CS 5339	Secure Web-Based Systems	3
CS 5340	Advanced Operating Systems	3
CS 5341	Advanced Computer Architecture	3
CS 5342	Database Management	3
CS 5350	Advanced Algorithms	3
CS 5351	Interval Computations	3
CS 5352	Computer Security	3
CS 5354	Topics/Intelligent Computing	3
CS 5361	Machine Learning	3
CS 5362	Data Mining	3
CS 5363	Computer Vision	3
CS 5364	Topics in Data Science	3
CS 5371	Software Safety & Risk Analysis	3
CS 5372	Spec. & Design of Real-Time Sys	3
CS 5373	Graduate Student Internship	3
CS 5374	Software Construction	3
CS 5375	Software Reverse Engineering	3
CS 5376	Comp. Dec Making & Risk Anal	3
CS 5377	Cyber-Sec for Critical Op Tech	3
CS 5381	Topics in Software Engineering	3
CS 5382	Model-Based Software Devlpmt	3
CS 5385	Software Requirements Engr	3
CS 5386	Software Architecture & Design	3
CS 5387	Software Integration and V&V	3
CS 5388	Software Project Management	3
CS 5390	Special Topic Computer Science	3
CS 5391	Individual Studies	3

M.S. in Construction Management (<http://catalog.utep.edu/grad/college-of-engineering/civil-engineering/construction-management-ms/>) / B.S. in Construction Engineering and Management

Code	Title	Hours
CE 5324	Construction Management	3
CE 5382	Adv Constr Cost Analysis & Bid	3
CE 5385	Construction Internship	3
CE 5386	Adv Construction Law & Ethics	3
CE 5388	Advanced Construction Safety	3
CE 5390	Special Topics Civil Engr	3

M.S. in Economics (<http://catalog.utep.edu/grad/college-of-business-administration/economics-finance/economics-ms/>) / B.B.A in Economics

Code	Title	Hours
ECON 5305	Applied Mathematical Economics	3
ECON 5311	Managerial Economics	3
ECON 5321	Public Choice	3
ECON 5330	Public Sector Economics	3
ECON 5334	Urban Economics	3
ECON 5361	Applied International Economic	3
ECON 5365	Economic Development	3
ECON 5366	Latin American Economics	3
ECON 5370	Applied Econometrics	3

M.S. in Electrical Engineering (<http://catalog.utep.edu/grad/college-of-engineering/electrical-computer-engineering/electrical-engineering-ms/>); **M.S. in Computer Engineering** (<http://catalog.utep.edu/grad/college-of-engineering/electrical-computer-engineering/computer-engineering-ms/>), **Ph.D. in Electrical and Computer Engineering** (<http://catalog.utep.edu/grad/college-of-engineering/electrical-computer-engineering/electrical-computer-engineering-phd/>) / **B.S. in Electrical Engineering**

Code	Title	Hours
ECE 5141	Laboratory for ECE 5343	1
ECE 5190	Special Topics Lab in ECE	1
ECE 5300	Probability & Random Processes	3
ECE 5301	Computational Methods for EE	3
ECE 5310	Power System Operations	3
ECE 5311	Smart Grid Fundamentals	3
ECE 5312	Energy Sustainability	3
ECE 5313	Advanced Trans Power Flow Cont	3
ECE 5314	Applied Photovoltaics	3
ECE 5321	Antenna Theory	3
ECE 5322	Adv Fiber Optic Communications	3
ECE 5323	Radar Signal Processing	3
ECE 5327	EM Analysis Using FDTD	3
ECE 5330	Digital Signal Processing	3
ECE 5331	Image Processing	3
ECE 5332	Biomed Signal & Image Process	3
ECE 5333	Intro to Remote Sensing Syst	3
ECE 5335	Adv Digital Communications	3
ECE 5336	Stat Infer for Signal Analysis	3
ECE 5340	Semiconductor Device Physics	3
ECE 5341	Electronic Material Processing	3
ECE 5342	Modern Semiconductor Devices	3
ECE 5343	Nanoelectronics	3
ECE 5350	Operating Systems	3
ECE 5352	Computer Architecture I	3
ECE 5353	Advanced Digital Syst Design I	3
ECE 5355	Advanced VLSI Design	3
ECE 5361	Fuzzy Logic & Engineering	3
ECE 5362	Computer Vision	3
ECE 5371	Data Communications	3
ECE 5372	Network Protocols	3
ECE 5380	Linear Systems Analysis	3
ECE 5381	Systems Engineering Fundamtl	3
ECE 5390	Special Topics Electrical Engr	3
ECE 5391	Individual Studies	3
ECE 5392	Research Methods	3

M.S. in Environmental Sciences (<http://catalog.utep.edu/grad/college-of-science/earth-environmental-and-resource-sciences/environmental-science-ms/>) / **B.S. in Environmental Sciences**

Code	Title	Hours
BINF 5341	Anal./Model of Bio Structures	3
BINF 5351	Intro. Bioinformatics I	3
BINF 5352	Intro. Bioinformatics II	3
BINF 5354	Post-Genomic Analysis	3
BIOL 5130	Seminar	1
BIOL 5131	Ethical, Soc/Pol Dimensions	1
BIOL 5301	Select Adv Topics Biol Science	3
BIOL 5305	Herpetology	3

BIOL 5308	Rsrch Funding & Prof Developmt	3
BIOL 5313	Biogeography	3
BIOL 5316	Biosystematics	3
BIOL 5322	Advances/Evolutionary Theory	3
BIOL 5326	Advances Immunological Concept	3
BIOL 5327	Advances in Ecological Theory	3
BIOL 5328	Biostatistics	3
BIOL 5329	Physiology of Bacterial Cell	3
BIOL 5340	Structure/Funct Macromolecules	3
BIOL 5344	Molecular Pathogenesis	3
BIOL 5351	Intro Bio I:Basic Seq. Comp.	3
BIOL 5352	Intro Bio II: Gene Find/Compar	3
BIOL 5360	Aquatic Ecology	3
CHEM 5321	Advanced Organic Chemistry I	3
CHEM 5322	Advanced Organic Chemistry II	3
CHEM 5329	Contem Topics Organic Chemistr	3
CHEM 5339	Contemp Topics in Biochemistry	3
CHEM 5341	Anal./Model of Bio Structures	3
CHEM 5351	Advanced Physical Chemistry I	3
GEOL 5101	Graduate Seminar	1
GEOL 5115	Selected Topics in Geol Scien	1
GEOL 5162	Directed Study in Geology	1
GEOL 5289	Graduate Research in Geol Sci	2
GEOL 5303	Computer Appl in Earth Sci	3
GEOL 5308	Planetary Geology	3
GEOL 5310	Intro Entrepreneurial Geosci	3
GEOL 5315	Selected Topics-Geological Sci	3
GEOL 5317	Hydrogeology	3
GEOL 5318	Petroleum Geology	3
GEOL 5320	Environmental Tracers in Water	3
GEOL 5321	Introduction to GIST	3
GEOL 5322	Advanced GIST	3
GEOL 5323	Spat Analysis Earth/Env Sci	3
GEOL 5324	Machine Learning in Geoscience	3
GEOL 5343	Isotope Geology	3
GEOL 5344	Advanced Petrology	3
GEOL 5362	Directed Study in Geology	3
GEOL 5363	Sandstone Petrography	3
GEOL 5364	Sedimentary Depositional Envir	3
GEOL 5365	Basin Analysis	3
GEOL 5375	Quantit Techniq Geological Sci	3
GEOL 5376	Low Temperature Geochemistry	3
GEOL 5378	Global Biochemical Cycles	3
GEOL 5381	Paleoclimatology	3
GEOL 5389	Graduate Research in Geol Sci	3
GEOL 5397	Geol/Mineral Resources Mexico	3
GEOL 5401	Fundamentals of Earth Science	4
GEOL 5402	Fundmtls/Fld Meth in Earth Sci	4
GEOP 5163	Directed Study in Geophysics	1
GEOP 5263	Directed Study in Geophysics	2
GEOP 5306	Atmospheric Processes	3
GEOP 5336	Digital Image Processing	3

GEOP 5352	Geophysical Inverse Theory	3
GEOP 5353	Reflection Seismic Data Proces	3
GEOP 5354	Seismology	3
GEOP 5356	Topics in Geophysics	3
GEOP 5357	Well Logging	3
GEOP 5361	Plate Tectonics	3
GEOP 5363	Directed Study in Geophysics	3
GEOP 5460	Geop App-Digital Signal Proces	4
MATH 5311	Topics in Applied Mathematics	3
MATH 5321	Principles of Analysis	3
MATH 5325	Principles of Algebra	3
MATH 5329	Numerical Analysis	3
MATH 5330	Comp Methods of Linear Algebra	3
MATH 5331	Real Variables	3
MATH 5335	Techniques in Optimization	3
MATH 5341	General Topology	3
MATH 5343	Numer Solution Part Diff Equat	3
MATH 5345	Numerical Optimization	3
MATH 5351	Complex Variables	3
PHYS 5196	Graduate Research in Physics	1
PHYS 5321	Mechanics	3
PHYS 5325	Mathematical Physics	3
PHYS 5341	Electrodynamics	3
PHYS 5361	Quantum Mechanics	3
PHYS 5365	Advanced Statistical Mechanics	3
PHYS 5371	Solid State Physics	3
PHYS 5393	Special Topics in Physics	3
PHYS 5396	Graduate Research in Physics	3
STAT 5329	Statistical Programming	3
STAT 5354	Post-Genomic Analysis	3
STAT 5428	Intro to Statistical Analysis	4

M.S. in Industrial Engineering (<http://catalog.utep.edu/grad/college-of-engineering/industrial-manufacturing-systems-engineering/industrial-engineering-ms/>) / B.S. in Industrial Engineering

Code	Title	Hours
IE 5341	Adv Production/Inven Control	3
IE 5351	Linear and Combin Optimiz Meth	3
IE 5352	Design/Analysis Indust Exprmnt	3
IE 5357	Computer Simulation Appli	3
IE 5377	Adv Ergonomics/Process Design	3
IE 5385	Advanced Quality Control	3
IE 5390	Special Topics Industrial Engr	3
IE 5391	Individual Studies	3

M.S. in Intelligence and National Security Studies (<http://catalog.utep.edu/grad/college-of-liberal-arts/criminal-justice/intelligence-national-security-studies-master-of-science/>) / Minor in Intelligence and National Security Studies

Code	Title	Hours
INSS 5301	Histl Devlpmt of Intel Comnty	3
INSS 5310	Intel & Counterterrorism	3
INSS 5315	Intel & Counterproliferation	3
INSS 5320	Counterintel & Security	3

M.S. in Kinesiology (<http://catalog.utep.edu/grad/college-of-health-sciences/kinesiology/kinesiology-ms/>) / B.S. In Kinesiology

Code	Title	Hours
KIN 5361	Biomech. Tech & Basis of Sport	3
KIN 5372	Advanced Exercise Physiology	3
KIN 5373	Motor Neuroscience	3
KIN 5371	Measure Tech in Exer Physiolog	3
KIN 5374	Measure Tech in Biomech Analys	3
KIN 5375	Adv. Sci. Prin. Str. & Cond.	3

M.S. in Manufacturing Engineering (<http://catalog.utep.edu/grad/college-of-engineering/industrial-manufacturing-systems-engineering/manufacturing-engineering-ms/>) / B.S. in Industrial Engineering

Code	Title	Hours
MFG 5311	Design for Manufacturability	3
MFG 5312	Strategic Design-Mfg Processes	3
MFG 5314	Robotics & Flexible Automation	3
MFG 5321	Modeling/Analysis-Mfg Process	3
MFG 5350	Reliability & Maintainability	3
MFG 5359	Computer-Aided Manufacturing	3
MFG 5390	Special Topics	3
MFG 5391	Individual Studies	3

M.S. in Mathematical Sciences (<http://catalog.utep.edu/grad/college-of-science/mathematical-sciences/mathematical-sciences-ms/>) / B.S. in Mathematical Sciences

Code	Title	Hours
MATH 5311	Topics in Applied Mathematics	3
MATH 5321	Principles of Analysis	3
MATH 5325	Principles of Algebra	3
MATH 5329	Numerical Analysis	3
MATH 5330	Comp Methods of Linear Algebra	3
MATH 5331	Real Variables	3
MATH 5335	Techniques in Optimization	3
MATH 5341	General Topology	3
MATH 5343	Numer Solution Part Diff Equat	3
MATH 5345	Numerical Optimization	3
MATH 5351	Complex Variables	3
MATH 5370	Special Topics	3

M.S. in Mechanical Engineering (<http://catalog.utep.edu/grad/college-of-engineering/mechanical-engineering/mechanical-engineering-ms/>) / B.S. in Mechanical Engineering, BS in Aerospace & Aeronautical Engineering

Code	Title	Hours
MECH 5301	Mathl Methods for Mech Eng	3
MECH 5302	Solid Mechanics I	3
MECH 5303	Heat Transfer I	3
MECH 5305	Comp. Fluid Dynamics	3
MECH 5306	Fluid Dynamics	3
MECH 5310	Thermodynamics	3
MECH 5311	Adv Finite Element Analysis	3
MECH 5312	Solid Mechanics II	3
MECH 5313	Mech of Composite Materials	3
MECH 5318	Analytical Dynamics	3
MECH 5334	Space Systems Design	3
MECH 5335	Aerospace Propulsion	3
MECH 5336	Aerospace Structures	3

MECH 5337	Aero Dynamics and Controls	3
MECH 5351	Intro to 3D Eng & Additive Mfg	3
MECH 5352	Dsg for 3D Eng & Additive Man	3
MECH 5353	Adv 3D Eng & Additive Manufact	3
MECH 5390	Special Topics Mechanical Engr	3

M.S. in Metallurgical and Materials Engineering/ B.S. in Metallurgical and Materials Engineering

Code	Title	Hours
MME 5302	Matls Extrac, Synth, & Process	3
MME 5304	Phase Transformations & Micros	3
MME 5308	Mechanical Behavior of Matls	3
MME 5310	Advanced Failure Analysis	3
MME 5311	Ceramics	3
MME 5313	Advanced Matrls & Composites	3
MME 5314	Polymer Engineering	3
MME 5315	Metallography and Micro Inter.	3
MME 5321	Engineering Alloys	3
MME 5331	Biomaterials	3
MME 5333	Biofabrication	3
MME 5342	Hydrometallurgy	3
MME 5350	Material Joining Technologies	3
MME 5351	Non-Destructive Examination	3
MME 5352	Root Cause Analysis	3
MME 5353	Fracture Mechanics	3
MME 5390	Special Topics	3
MME 5401	Microstruc & Microchem Charac	4
MME 5403	Adv Concepts in Matls Sci Engr	4

M.S. in Physics (<http://catalog.utep.edu/grad/college-of-science/physics/physics-ms/>) / B.S. in Physics

Code	Title	Hours
PHYS 5196	Graduate Research in Physics	1
PHYS 5321	Mechanics	3
PHYS 5325	Mathematical Physics	3
PHYS 5341	Electrodynamics	3
PHYS 5361	Quantum Mechanics	3
PHYS 5365	Advanced Statistical Mechanics	3
PHYS 5371	Solid State Physics	3
PHYS 5396	Graduate Research in Physics	3

M.S. in Software Engineering (<http://catalog.utep.edu/grad/college-of-engineering/computer-science/software-engineering/>) / B.S. in Computer Science

Code	Title	Hours
CS 5313	Computer Networks	3
CS 5317	Human-Computer Interaction	3
CS 5334	Parallel & Concurrent Program	3
CS 5352	Computer Security	3
CS 5371	Software Safety & Risk Anlysis	3
CS 5372	Spec. & Desgn of Real-Time Sys	3
CS 5374	Software Construction	3
CS 5375	Software Reverse Engineering	3
CS 5376	Comp. Dec Making & Risk Anal	3
CS 5377	Cyber-Sec for Critical Op Tech	3
CS 5381	Topics in Software Engineering	3

CS 5382	Model-Based Software Devlpmnt	3
CS 5385	Software Requirements Engr	3
CS 5387	Software Integration and V&V	3
CS 5388	Software Project Management	3

M.S. in Statistics (<http://catalog.utep.edu/grad/college-of-science/mathematical-sciences/statistics-ms/>) and Data Science (<http://catalog.utep.edu/grad/college-of-science/mathematical-sciences/statistics-ms/>) / B.S. in Mathematical Sciences

Code	Title	Hours
MATH 5321	Principles of Analysis	3
STAT 5329	Statistical Programming	3
STAT 5428	Intro to Statistical Analysis	4

M.S. in Systems Engineering (<http://catalog.utep.edu/grad/college-of-engineering/industrial-manufacturing-systems-engineering/systems-engineering-ms/>) / B.S. in Industrial Engineering

Code	Title	Hours
SE 5341	Systems Engr Fundamentals	3
SE 5342	Systems Engr Management	3
SE 5343	Systems Requirements Analysis	3
SE 5344	Sys Intgrtn, Verfctn, & Valdtn	3
SE 5390	Systems Engr Special Topics	3
SE 5391	Individual Studies	3

Master of Social Work (<http://catalog.utep.edu/grad/college-of-health-sciences/social-work/master-of-social-work/>) / Bachelor of Social Work

Code	Title	Hours
SOWK 5331	SOWK Theory & Pract w/Indiv	3
SOWK 5332	SOWK Theory & Pract w/Families	3
SOWK 5333	SOWK Theory & Pract w/Groups	3

PhD in Data Science / B.S. in Mathematics, Concentration in Data Science

Code	Title	Hours
STAT 5385	Applied Regression Models	3
STAT 5474	Statistical Machine Learning I	4
STAT 5329	Statistical Programming	3
STAT 5428	Intro to Statistical Analysis	4
MATH 5330	Comp Methods of Linear Algebra	3

M.B.A - Master of Business Administration / B.S. in Industrial and Systems Engineering

Code	Title	Hours
ACCT 5304	Accounting Analysis	3
MGMT 5311	Organizational Mgmt Seminar	3
BLAW 5306	Business Law and Ethics	3
QMB 5311	Quantitative Methods-Business	3
FIN 5311	Financial Management	3
ECON 5311	Managerial Economics	3
MKT 5311	Marketing Management	3
OSCM 5308	Concepts of Production Mgmt	3

MAcc in Accounting / BBA in Accounting

Code	Title	Hours
ACCT 5302	Advanced Accounting I	3
ACCT 5310	Contemporary Accounting Issues	3
ACCT 5314	Professional Wrting-Accountants	3
ACCT 5322	Accounting & Tax Research	3

ACCT 5323	Advanced Auditing	3
ACCT 5324	Accounting Analytics	3
ACCT 5328	Fed Income Tax Partner & Corp	3
ACCT 5329	Ethics in Accounting	3
ACCT 5391	Accounting & Business Analysis	3

M.S. in Computer Engineering/M.S. in Electrical Engineering/ Ph.D. in Electrical and Computer Engineering/ B.S. in Computer Engineering

Code	Title	Hours
ECE 5314	Applied Photovoltaics	3
ECE 5300	Probability & Random Processes	3
ECE 5301	Computational Methods for EE	3
ECE 5380	Linear Systems Analysis	3
ECE 5327	EM Analysis Using FDTD	3
ECE 5321	Antenna Theory	3
ECE 5340	Semiconductor Device Physics	3
ECE 5344	Advanced Optoelectronic Device	3
ECE 5342	Modern Semiconductor Devices	3
ECE 5341	Electronic Material Processing	3
ECE 5343	Nanoelectronics	3
ECE 5328	21st Century Electromagnetics	3
ECE 5335	Adv Digital Communications	3
ECE 5336	Stat Infer for Signal Analysis	3
ECE 5371	Data Communications	3
ECE 5322	Adv Fiber Optic Communications	3
ECE 5326	Computational Electromagnetics	3
ECE 5381	Systems Engineering Fundamentals	3
ECE 5395	Practicum in Elect & Comp Eng	3
ECE 5332	Biomed Signal & Image Process	3
ECE 5362	Computer Vision	3
ECE 5361	Fuzzy Logic & Engineering	3
ECE 5370	Security in Cyber-Phys Syst	3
ECE 5350	Operating Systems	3
ECE 5330	Digital Signal Processing	3
ECE 5331	Image Processing	3
ECE 5333	Intro to Remote Sensing Syst	3
ECE 5353	Advanced Digital Syst Design I	3
ECE 5352	Computer Architecture I	3
ECE 5355	Advanced VLSI Design	3
ECE 5372	Network Protocols	3
ECE 5312	Energy Sustainability	3
ECE 5311	Smart Grid Fundamentals	3
ECE 5313	Advanced Trans Power Flow Cont	3
ECE 5310	Power System Operations	3
ECE 5323	Radar Signal Processing	3
ECE 5390	Special Topics Electrical Engr	3
ECE 5391	Individual Studies	3
ECE 5141	Laboratory for ECE 5343	1
ECE 5190	Special Topics Lab in ECE	1
ECE 5191	Individual Studies	1
ECE 5291	Individual Studies	2

M.S. in Physics (<http://catalog.utep.edu/grad/college-of-science/physics/physics-ms/>) / B.S. in Physics

Code	Title	Hours
PHYS 5196	Graduate Research in Physics	1
PHYS 5321	Mechanics	3
PHYS 5325	Mathematical Physics	3
PHYS 5341	Electrodynamics	3
PHYS 5361	Quantum Mechanics	3
PHYS 5365	Advanced Statistical Mechanics	3
PHYS 5371	Solid State Physics	3
PHYS 5396	Graduate Research in Physics	3

M.S. in Software Engineering (<http://catalog.utep.edu/grad/college-of-engineering/computer-science/software-engineering/>) / B.S. in Computer Science

Code	Title	Hours
CS 5313	Computer Networks	3
CS 5317	Human-Computer Interaction	3
CS 5334	Parallel & Concurrent Program	3
CS 5352	Computer Security	3
CS 5371	Software Safety & Risk Analysis	3
CS 5372	Spec. & Desgn of Real-Time Sys	3
CS 5374	Software Construction	3
CS 5375	Software Reverse Engineering	3
CS 5376	Comp. Dec Making & Risk Anal	3
CS 5377	Cyber-Sec for Critical Op Tech	3
CS 5381	Topics in Software Engineering	3
CS 5382	Model-Based Software Devlpmnt	3
CS 5385	Software Requirements Engr	3
CS 5387	Software Integration and V&V	3
CS 5388	Software Project Management	3

M.S. in Statistics (<http://catalog.utep.edu/grad/college-of-science/mathematical-sciences/statistics-ms/>) and Data Science (<http://catalog.utep.edu/grad/college-of-science/mathematical-sciences/statistics-ms/>) / B.S. in Mathematical Sciences

Code	Title	Hours
MATH 5321	Principles of Analysis	3
STAT 5329	Statistical Programming	3
STAT 5428	Intro to Statistical Analysis	4

M.S. in Systems Engineering (<http://catalog.utep.edu/grad/college-of-engineering/industrial-manufacturing-systems-engineering/systems-engineering-ms/>) / B.S. in Industrial Engineering

Code	Title	Hours
SE 5341	Systems Engr Fundamentals	3
SE 5342	Systems Engr Management	3
SE 5343	Systems Requirements Analysis	3
SE 5344	Sys Intgrtn, Verfctn, & Valdtn	3
SE 5390	Systems Engr Special Topics	3
SE 5391	Individual Studies	3

Master of Social Work (<http://catalog.utep.edu/grad/college-of-health-sciences/social-work/master-of-social-work/>) / Bachelor of Social Work

Code	Title	Hours
SOWK 5331	SOWK Theory & Pract w/Indiv	3
SOWK 5332	SOWK Theory & Pract w/Families	3
SOWK 5333	SOWK Theory & Pract w/Groups	3

Below is a listing for the maximum hours allowed for each fast track program.

- Any M.S. degree in Biological Sciences department/Any Undergraduate degree implemented by the Biological Sciences Department - 9
- M.A. in English and American Literature/B.A. in English American Literature - 15
- M.A. in English-Rhetoric and Writing Studies/Minor in English: Rhetoric/Writing Studies - 15
- M.A. in Linguistics/B.A. in Linguistics - 15
- M.A. in Philosophy/B.A. in Philosophy - 15
- M.A. in Political Science/B.A. in Political Science - 6
- M.A. in Sociology/B.A. in Anthropology - 15
- M.A. in Teaching English/B.A. in English or B.A. in English Literature - 6
- M.B.A. - Master of Business Administration/B.B.A. in Finance - 12
- M.B.A. - Master of Business Administration/B.B.A. General Business (Concentration in General Business) - 12
- M.B.A. - Master of Business Administration/B.S. in Biomedical Sciences - 12
- M.B.A. - Master of Business Administration/B.S. in Ecology and Evolutionary Biology - 15
- M.B.A. - Master of Business Administration/B.S. Geological Sciences - 12
- M.B.A. - Master of Business Administration/B.S. in Mathematical Sciences (Applied Concentration) - 12
- M.B.A. - Master of Business Administration/B.S. in Mathematical Sciences (Statistics Concentration) - 9
- M.B.A. - Master of Business Administration/B.S. in Mathematical Sciences - 12
- M.B.A. - Master of Business Administration/B.S. in Microbiology - 9
- M.B.A. - Master of Business Administration/B.S. in Physics - Applied Physics Concentration - 9
- M.Ed. - Curriculum and Instruction/B.S. in Education; B.A. in Psychology; B.A. in Sociology, B.A. in Spanish, B.A. in English, B.B.A. in General Business; B.S. in Mathematical Sciences; B.S. in Physics - 15
- M.Ed. - Educational Diagnostician/B.S. in Education with a concentration in Studies Special Education - 15
- M.Ed. - Special Education/B.S. in Education - 15
- M.S. in Aerospace Engineering/B.S. in Aerospace & Aeronautical Engineering/B.S. in Mechanical Engineering - 15
- M.S. in Bioinformatics/B.S. in Biomedical Sciences; B.S. in Microbiology - 15
- M.S. in Bioinformatics/B.S. in Chemistry - 15
- M.S. in Bioinformatics/B.S. in Computer Science - 15
- M.S. in Bioinformatics/B.S. in Mathematics - 15
- M.S. in Biomedical Engineering/B.S. in Biomedical Sciences; B.S. in Cellular and Molecular Biochemistry; B.S. in Microbiology - 15
- M.S. in Biomedical Engineering/B.S. in Metallurgical and Materials Engineering - 15
- M.S. in Chemistry/B.S. in Chemistry - 15
- M.S. in Civil Engineering; M.S. in Environmental Engineering; M.E. in Civil and Environmental engineering/B.S. in Civil Engineering - 6
- M.S. in Computer Science; M.S. in Data and Information Sciences; Graduate Certificate