

Courses listed within this plan are only recommended coursework and should be individualized to meet your educational and career goals.



Milford High School – MCC & NHTI Concord & University of New Hampshire/Engineering

Career Pathway Plan of Study

NHTI – Concord
Courses in Blue/Italics

Bold – College Entrance Requirement
Black – High School Requirement

BOLD, UNDERLINED & ITALICS –
Transcripted Dual Enrollment Credit

	Grade	English/ Language Arts	Math	Science	Social Studies /Sciences	Other Required Courses (R) Recommended Electives (E)	*Career and Technical Courses and/or Degree Major Courses	SAMPLE Occupations Relating to This Pathway
S E C O N D A R Y	9	English 9 Levels A or H Recommended for UNH	Algebra I (Std)	Physical Science (A, H)	American Studies 9 (A, H)	Wellness I (R) World Lang. (E)	Intro to Pre-Engineering	Electrical Engineer Mechanical Engineer Manufacturing Engineer
	10	English 10 A or H Recommended	Geometry (Std, H) Algebra II (Std, H)	Biology (A, H)	American Studies 10 (A, H)	Fine Arts (R) World Lang. (E) Programming Fundamentals (E) Java Programming (E)	Intro to Pre-Engineering AND/OR <u>Engineering Design</u> AND/OR <u>Mechatronics Precision</u> <u>Machining</u>	Aerospace Engineer Biomedical Engineer Chemical Engineer E.I.T. Civil Engineer Computer Engineer Computer Scientist
	11	English 11 Levels A or H Recommended	Algebra III/Trig. (Std A, H) <u>Prob. & Statistics</u> AND/OR Pre-Calculus (A, H)	Chemistry (A, H) (UNH Preferred) AND/OR Physics (A, H)	World Studies (A,H)	Wellness II (R) <u>Java Programming (E)</u> World Lang. (E) Data Structures & Algorithms (E) Speech (E) Applied Business Applications (E)	<u>Engineering Design</u> <u>Mechatronics Precision</u> <u>Machining</u> <u>Adv. Engineering Design</u> AND/OR <u>CIM – Computer Integrated</u> <u>Manufacturing</u>	Electrical Engineer Materials Engineer Nuclear Engineer Environmental Engineer Architectural Engineer Geological Engineer
	12	English 12 A or H/AP Recommended	Pre-Calculus (A, H) AND/OR Calculus (Std, AP)	AP Chemistry (4) (Elective) AND/OR Physics (A, H)	Social Studies Elective	World Lang. (E) <u>College Composition (E)</u> Career Focus Internship (E)	<u>Adv. Engineering Design</u> AND/OR <u>CIM – Computer Integrated</u> <u>Manufacturing**</u> **(if not taken Junior Year)	Mechatronics Robotics Engineering Industrial Design
P O S T S E C O N D A R Y	13	<i>English Composition AND Communications</i> English Composition	<i>Elementary Functions AND Pre-Calculus</i> Calculus I & II	<i>Physics I & II</i> Physics (2 nd Semester) Chemistry	<i>N/A</i> Social Science – Gen. Ed.	<i>PC Applications (R) [1]</i> Intermediate Level Foreign Language (R) OR Foreign Culture (R)	<i>PC Applications, Manufacturing & Materials Processing, OR Electric Circuits (OR other Discipline specific courses)</i> Computer Aided Design OR Intro to Environmental Issues OR (16 possible Engineering Major Courses throughout the 4yrs)	Notes: Assessments/Placement tests Required at UNH and NHTI- Concord. [1] May Test Out AP Chem may replace NHCTC General Chemistry 1 with score of 3 or higher.
	14	<i>N/A</i> N/A	<i>Calculus I (R) Calculus II (E)</i> Differential Equations (R) Statistics (R)	<i>General Chemistry</i> Organic Chemistry OR Physical Chemistry (R)	<i>Social Science Gen. Ed. (R)</i> Social Science Gen. Ed. (R)	<i>Humanities, Fine Arts OR Foreign Language Course (R)</i> N/A	<i>Senior Design Project (Electrical Only) Mechanical Design, Machine Design, Drafting OR other Discipline specific courses.</i> See Year 13	<i>Students are Recommended to attend Job Shadows and participate in the Career Focus Internship while at MHS.</i>
	University of New Hampshire Bachelor of Science Degree: Engineering							
15	N/A	Multi- Dimensional Calculus (R)	N/A	4 Soc. Science Gen. Ed Courses (R)	N/A	See Year 13	<u>Running Start College Credit available thru courses in Bold, Underlined & in Italics.</u>	

	16	N/A	N/A	N/A	See above (6 total courses)	N/A	Capstone Design (Full Year) See Year 13	
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