Executive Summary
Bachelor of Science in Engineering Technology
University of Houston-Clear Lake

1. Congruence with System Goals and University Mission

The proposed **Bachelor of Science (BS) in Engineering Technology** at the **University of Houston-Clear Lake (UHCL)** will address a growing regional and statewide demand for professionals who can apply engineering principles in manufacturing, operations, testing, quality assurance, automation, and technical management environments. The program aligns with the University of Houston System's commitment to workforce development, student success, and economic growth by expanding access to applied STEM education and preparing graduates for high-demand technical careers.

Located in one of the nation's largest centers for aerospace, energy, chemical manufacturing, healthcare technology, and maritime industries, UHCL is uniquely positioned to educate professionals who can bridge engineering theory and industrial practice. The degree supports UHCL's mission by providing students with hands-on, industry-relevant preparation while strengthening educational pathways for community college transfers and students seeking an application-focused alternative to traditional engineering programs.

2. Program Description

The BS in Engineering Technology is a 120-semester-credit-hour undergraduate degree emphasizing practical application of engineering concepts, laboratory experiences, and project-based learning. The curriculum combines newly developed Engineering Technology coursework with existing courses in engineering, engineering management, occupational safety and health, mathematics, science, and communication. Key areas of study include: applied statics and dynamics, strength of materials, electrical circuits and instrumentation, manufacturing technology, industrial materials, quality assurance and control, lean manufacturing, occupational safety and health, engineering management, and Capstone design projects.

The program is designed to prepare graduates for careers involving manufacturing operations, process improvement, quality systems, technical supervision, testing and evaluation, maintenance engineering, and industrial automation. UHCL plans to pursue ABET Engineering Technology Accreditation Commission (ETAC) accreditation when the program becomes eligible.

3. Student and Job Market Demand

The proposed program responds to documented workforce needs within Texas and the Houston metropolitan region. Employers increasingly seek professionals with applied engineering and

technology skills who can support complex industrial systems, improve processes, manage quality programs, and implement emerging technologies.

The Houston area's concentration of aerospace, energy, petrochemical, manufacturing, healthcare, and transportation industries creates significant demand for engineering technology graduates. These sectors require employees who understand engineering fundamentals while possessing the practical skills necessary to implement solutions in operational environments.

Student demand is also expected to be strong. Engineering Technology programs at peer Texas institutions have experienced substantial enrollment growth, reflecting increased interest in applied engineering degrees. UHCL is positioned to attract students from multiple sources, including: community college transfer programs, associate-degree graduates in engineering and technical disciplines, current UHCL students seeking an applied engineering pathway, and first-time college students interested in hands-on stem careers.

The program's practical focus and strong connection to regional workforce needs provide a clear value proposition for prospective students.

4. Program Duplication

UHCL's proposed *broad-based* Engineering Technology curriculum is intentionally interdisciplinary, combining mechanical systems, electrical applications, manufacturing processes, quality management, safety, and engineering management within a single degree. This structure reflects the multidisciplinary nature of modern industrial workplaces and distinguishes the program from more narrowly focused alternatives.

The proposed degree fills a unique geographic and academic niche. Within the Houston metropolitan area, the University of Houston and the University of Houston-Downtown offer *specialized* Engineering Technology degrees. Those programs serve important but different disciplinary and geographic markets; UHCL's proposed program is intentionally *general* and *interdisciplinary*, with a Southeast Houston focus.

While no comparable *broad-based* Engineering Technology bachelor's program currently serves the Clear Lake/Southeast Houston region, *broad-based* Engineering Technology programs can be found elsewhere in Texas, including Sam Houston State University (95 miles), Texas State University (193 miles), the University of Texas-Rio Grande Valley (350 miles), and West Texas A&M University (635 miles).

Rather than duplicating existing offerings, the proposed program complements engineering and technology programs throughout Texas while meeting workforce needs specific to the Houston region.

5. Faculty Resources

The proposed degree can be implemented efficiently through strategic use of existing UHCL resources. Most supporting coursework is already offered within the College of Science and

Engineering, and the program will leverage established laboratories, equipment, and instructional infrastructure.

To support enrollment growth and program administration, UHCL plans a phased hiring strategy that includes one Engineering Technology Program Director and two Engineering Technology Lecturers over the first three years

The program will utilize existing instructional laboratories in manufacturing, instrumentation and controls, materials testing, engineering graphics, thermofluids, additive manufacturing, and related engineering areas. Because these facilities are already in place, no major capital investments or new construction are required.

6. State and National Need

Texas and the nation continue to experience growing demand for professionals capable of applying engineering principles in operational, manufacturing, testing, quality, safety, and technical management environments. The proposed BS in Engineering Technology directly addresses this need by producing graduates with strong technical competencies, practical laboratory experience, and industry-relevant problem-solving skills.

The program is especially responsive to workforce needs in the Houston region, where employers seek professionals who can support increasingly complex technological systems and processes across multiple industries. By developing graduates with broad technical preparation and interdisciplinary skills, the program will help address current workforce shortages while supporting future economic growth and technological innovation.

Through its efficient use of existing resources, strong transfer pathways, industry-aligned curriculum, and focus on applied learning, the proposed BS in Engineering Technology will expand educational opportunities, strengthen workforce development, and advance UHCL's mission of serving the region and the state of Texas.

7. Conclusion

The proposed Bachelor of Science in Engineering Technology will expand educational opportunities for students, address documented workforce needs, and strengthen UHCL's contribution to regional economic development. By combining applied engineering knowledge, hands-on laboratory experiences, and industry-responsive curriculum design, the program will prepare graduates to succeed in a wide range of technical and supervisory careers.

The program represents a cost-effective and strategically aligned addition to UHCL's academic portfolio. Leveraging existing faculty expertise, facilities, and community partnerships, it will enhance workforce preparation, support transfer student success, and provide the Houston region with highly skilled graduates prepared to contribute immediately to industry and innovation.

PRO FORMA FOR BS in Engineering Technology

FY2028

			Operating Years					
			Year 0	FY2028	FY2029	FY2030	FY2031	FY2032
Enrollments				Fall27	Fall28	Fall29	Fall30	Fall31
Cohort 1				20	18	16	15	
Cohort 2					22	20	18	16
Cohort 3						24	22	19
Cohort 4							26	23
Cohort 5								28
Cohort 6								
Total				20	40	60	80	87
Expenses								
Faculty (9 month)	Salary	% effort	Year 0	FY2028	FY2029	FY2030	FY2031	FY2032
Assistant/Associate Professor	107,266	100%		107,266	109,411	111,600	113,832	116,108
Lecturer 1	70,000	100%		-	70,000	71,400	72,828	74,285
Lecturer 2	70,000	100%		-	-	70,000	71,400	72,828
Existing Faculty Overload				10,000	5,000	5,000	-	-
Position 5				-	-	-	-	-
Position 6				-	-	-	-	-
Adjuncts			-	6,480	6,610	-	-	-
Subtotal	247,266	300%	-	123,746	191,021	258,000	258,060	263,221
Faculty FTE				3.00	3.00	3.00	3.00	3.00
Staff (12 month)								
Program Director Stipend	5,363	100%		5,363	5,470	5,580	5,691	5,805
Position 2				-	-	-	-	-
Position 3				-	-	-	-	-
Position 4				-	-	-	-	-
Position 5				-	-	-	-	-
Position 6				-	-	-	-	-
Graduate Students			-	-	-	-	-	-
Subtotal	5,363	100%	-	5,363	5,470	5,580	5,691	5,805
Staff FTE				0.03	0.03	0.03	0.03	0.03
Total Salaries			-	129,109	196,492	263,579	263,751	269,026
Benefits @ 20.5%			-	26,467	40,281	54,034	54,069	55,150
Total Personnel			-	155,576	236,772	317,613	317,820	324,176
Non-Personnel								
Marketing/Recruiting					-	-	-	-
Scholarships & Tuition Assistantships					-	-	-	-
Annual maintenance & operations				10,000	10,000	10,000	10,000	10,000
Library and Information Technology				10,000	10,000	10,000	10,000	10,000
Accreditation					-	2,000	12,000	8,000
Facilities					-	-	-	-
Laboratory and other equipment				50,000	10,000	10,000	10,000	10,000
Other			-	-	-	-	-	-
Total Non-Personnel			-	70,000	30,000	32,000	42,000	38,000
Allocated to university operations	10%			13,014	26,028	44,847	57,861	68,786
Total Annual Expense			$ -	$ 238,590	$ 292,800	$ 394,459	$ 417,680	$ 430,962
Revenue								
Formula Funding Generated				-	-	112,045	112,045	236,540
Statutory Tuition Applied to Formula				-	-	(54,000)	(54,000)	(114,000)
Subtotal: State General Revenue				-	-	58,045	58,045	122,540
UH Tuition and Fees				147,600	295,200	442,800	590,400	641,160
Allocated to set aside per student				(17,460)	(34,920)	(52,380)	(69,840)	(75,844)
Total Revenue from Enrollment				130,140	260,280	448,465	578,605	687,855
Philanthropy and other External Revenue				-	-	-	-	-
Net Revenue				130,140	260,280	448,465	578,605	687,855
Net Annual Gain/(Loss)			-	**$ (108,450)**	**$ (32,520)**	**$ 54,006**	**$ 160,925**	**$ 256,894**
Cumulative Gain/(Loss)			-	**$ (108,450)**	**$ (140,971)**	**$ (86,965)**	**$ 73,960**	**$ 330,854**

Campus Signoff _____ Date: _____

Daniel Chang, Program Director, Office of the Provost Signature: _____ Date: _____

Vivianne Do, Executive Director, Office of the Provost Signature: _____ Date: _____

Executive Summary for UHS Board of Regents

Proposed Program Name: B.S. in Legal Studies
Date: October 9, 2026

Alignment with UH System Mission and Goals

The proposed Bachelor of Science in Legal Studies directly advances the University of Houston System mission by providing an accessible, interdisciplinary program that prepares students for careers and further study in law, public policy, criminal justice, government, compliance, advocacy, and related professions. The program serves UHD's diverse student population, including first-generation, transfer, and working-adult students, by offering a flexible pathway that develops critical thinking, ethical reasoning, analytical writing, and civic engagement. The curriculum supports regional workforce needs by preparing graduates who understand legal institutions, public policy, constitutional principles, and the social impacts of law.

Program Description and Curriculum Structure

The proposed 120-credit-hour B.S. in Legal Studies combines the 42-SCH university General Education curriculum with 30 SCH of structured major requirements and 48 SCH of electives or minor coursework. The major is organized around five academic areas: Logic, Ethics, Legal Institutions, Research Methods and Legal Language, and Law, Society, and History. Students examine legal systems through interdisciplinary coursework drawn from political science, criminal justice, philosophy, history, business, psychology, communication, and social sciences. A culminating field experience, special project, or directed studies component provides applied learning opportunities that connect academic theory with professional practice.

Student Learning and Educational Outcomes

Graduates will be able to critically analyze legal concepts from multiple perspectives, construct logical arguments connecting law, public policy, and social responsibility, and communicate legal research effectively through written and oral formats. The curriculum emphasizes analytical reasoning, ethical decision-making, legal research, persuasive communication, and informed civic engagement.

Workforce and Student Demand

Demand for graduates with legal knowledge extends beyond traditional law school preparation. Employers in government agencies, courts, compliance offices, nonprofit organizations, corporate environments, human resources, law enforcement, public administration, and advocacy organizations increasingly seek professionals who can interpret regulations, evaluate policy, communicate effectively, and navigate complex legal environments. The flexible structure of the degree also provides a strong foundation for students intending to pursue graduate or professional education, including law school, public administration, criminal justice, public policy, and related fields. This program is designed to accommodate a wide scope of Associate degree credits, thereby creating

another pathway for students transferring from UHD's many community college partners. Further, it is anticipated that FTICs who participate in the TEA's High School Legal Studies Program will find that this program is particularly well-suited to support their career ambitions.

Related and Similar Programs

The proposed B.S. in Legal Studies fills a distinctive role within the University of Houston System by providing a comprehensive undergraduate legal studies curriculum that is not exclusively housed within a single disciplinary framework. Its interdisciplinary design differentiates it from traditional criminal justice, political science, philosophy, or pre-law options while creating complementary pathways to existing graduate and professional programs across the System.

Faculty and Institutional Resources

The program is designed to utilize existing UHD faculty expertise across multiple academic departments, including Political Science, Criminal Justice, Philosophy, History, Business, Communication Studies, Psychology, and Social Sciences. Existing classrooms, online learning technologies, library resources, and student support services are sufficient to support program implementation. The interdisciplinary structure allows the degree to be launched with minimal new resource requirements while leveraging established institutional strengths.

Statewide and Regional Need

Texas continues to experience demand for professionals capable of understanding legal frameworks, public policy, regulatory requirements, and ethical decision-making. The Houston region's complex governmental, business, healthcare, energy, and nonprofit sectors require graduates who can analyze legal issues and communicate effectively across organizational settings. The proposed degree supports statewide goals related to workforce readiness, civic engagement, and access to high-value academic pathways while providing an affordable public option for students interested in legal studies and law-related careers.

PRO FORMA FOR BS IN LEGAL STUDIES

FY2028

			Year 0	Operating Years FY2028	FY2029	FY2030	FY2031	FY2032
Enrollments				Fall27	Fall28	Fall29	Fall30	Fall31
	Cohort 1			16	14	12	10	
	Cohort 2				16	14	12	10
	Cohort 3					20	15	12
	Cohort 4						22	16
	Cohort 5							24
	Cohort 6							
	Total			16	30	46	59	62
Expenses								
Faculty (9 month)	Salary	% effort	Year 0	FY2028	FY2029	FY2030	FY2031	FY2032
				-	-	-	-	-
	Andrew Pavelich	94,901	28%	26,572	27,104	27,646	28,199	28,763
	Jeff Jackson	96,241	28%	26,947	27,486	28,036	28,597	29,169
	Godwin Agboka	99,173	28%	27,768	28,324	28,890	29,468	30,057
	Maria Eugina Artabe	66,000	14%	9,240	9,425	9,240	9,425	9,613
				-	-	-	-	-
			-	-	-	-	-	-
	Subtotal	356,314	98%	- 90,528	92,339	93,812	95,688	97,602
Faculty FTE				0.98	0.98	0.98	0.98	0.98
Staff (12 month)								
	Andrea Olivera	60,000	10%	6,000	6,120	6,242	6,367	6,495
	advisor	45,000	25%	11,250	11,475	11,705	11,939	12,177
	Position 3			-	-	-	-	-
	Position 4			-	-	-	-	-
	Position 5			-	-	-	-	-
	Position 6			-	-	-	-	-
	Graduate Students		-	-	-	-	-	-
	Subtotal	105,000	35%	- 17,250	17,595	17,947	18,306	18,672
Staff FTE				0.35	0.35	0.35	0.35	0.35
	Total Salaries			- 107,778	109,934	111,759	113,994	116,274
	Benefits @ 30%	30%		- 32,333	32,980	33,528	34,198	34,882
	Total Personnel			- 140,111	142,914	145,287	148,192	151,156
Non-Personnel								
	Marketing/Recruiting			10,000	10,000	4,000	2,000	2,000
	Scholarships & Tuition Assistantships				-	-	-	-
	Annual maintenance & operations				5,000	5,000	5,000	5,000
	Library and Information Technology			5,000	5,000	5,000	5,000	5,000
	Accreditation				-	-	-	-
	Facilities				-	-	-	-
	Laboratory and other equipment							
	Other		-	5,000	3,000	3,000	3,000	3,000
	Total Non-Personnel		-	20,000	23,000	17,000	15,000	15,000
Allocated to university operations		10%		11,639	21,822	34,332	43,788	46,905
Total Annual Expense			$ -	$ 171,750	$ 187,736	$ 196,618	$ 206,980	$ 213,061
Revenue								
	Formula Funding Generated			-	-	49,507	49,507	102,654
	Statutory Tuition Applied to Formula			-	-	(40,800)	(40,800)	(84,600)
	Subtotal: State General Revenue			-	-	8,707	8,707	18,054
*	UHD Tuition and Fees			130,984	245,595	376,579	483,004	507,563
	Allocated to set aside per student			(14,598)	(27,371)	(41,969)	(53,830)	(56,567)
	Total Revenue from Enrollment			116,386	218,224	343,316	437,880	469,049
	Philanthropy and other External Revenue			-	-	-	-	-
	Net Revenue			116,386	218,224	343,316	437,880	469,049
	Net Annual Gain/(Loss)		-	**$ (55,364)**	**$ 30,488**	**$ 146,698**	**$ 230,900**	**$ 255,988**
	Cumulative Gain/(Loss)		-	**$ (55,364)**	**$ (24,876)**	**$ 121,822**	**$ 352,722**	**$ 608,710**

Campus Signoff _____ Date: _____

Daniel Chang, Program Director, Office of the Provost Signature: _____ Date: _____

Vivianne Do, Executive Director, Office of the Provost Signature: _____ Date: _____