

Physics is a natural science that involves the study of [matter](#)^[1] and its motion through [space-time](#), as well as all [applicable](#) concepts, such as energy and force. ^[2] More broadly, it is the general analysis of nature, conducted in order to understand how the universe behaves. ^{[3][4][5]} [Physics](#) is one of the oldest academic disciplines, [perhaps](#) the oldest through its inclusion of astronomy. ^[6] Over the last two millennia, [physics](#) had been considered [synonymous](#) with philosophy, chemistry, and certain branches of mathematics and biology, but during the Scientific Revolution in the [16th](#) century, it [emerged](#) to become a unique modern science in its own right. ^[7] However, in some subject areas such as in mathematical [physics](#) and quantum chemistry, the boundaries of [physics](#) remain difficult to distinguish. [Physics](#) is both significant and influential, in part because advances in its understanding have often translated into new technologies, but also because new ideas in [physics](#) often resonate with other sciences, mathematics, and philosophy. For example, advances in the understanding of [electromagnetism](#) or nuclear [physics](#) led directly to the development of new products which have dramatically transformed [modern-day](#) society, such as television, computers, domestic appliances, and nuclear [weapons](#); advances in [thermodynamics](#) led to the development of [motorized transport](#); and advances in [mechanics](#) inspired the development of calculus.

fiziks iz æ nœdrœl sIins tœt involvz tIΛ stΛde ov
mœtΛ œnd iœs mœstIin tIrœ sbœes tIm, œz wœl œz œl
ΛplikΛbœl konsepœs, sœtœ œz enΛje œnd fœrs. mœ

brædle, it iz tɪl jɛnrɔl ʌnoʊlɪsɪs ov nœdɪl, kʌndʌktɪd ɪn ɑrdl tɔ ʌndʌstənd hoo tɪl jɔnʌvɜrs bʌhœvz. fiziks iz wʌn ov tɪl oldɪst ɔkʌdemɪk dɪsʌplɪnz, pɜrhɔps tɪl oldɪst ɪrɔ ɪɔs ɪnkloʊʃɪn ov ʌsʃrɔnʌme. ōvʌ tɪl lɔst tɔ mʌlenel, fiziks hɔd bɛn kʌnsɪdɪd sɪnɔnʌmɪs wɪtɪl fɪlosɔfɛ, kemɪsʃrɛ ɔnd sɜrtɪn brʌnçɪz ov mɔtɪmɔtɪx ɔnd bɪolɔʃɛ, bʌt jɔrɛʃ tɪl sɪntɪfɪk revɔlɔʃɪn ɪn tɪl 16th sɛndrɛ, ɪt ɪmɜrd tɔ bɛkʌm œ jɔnɛk modɪn sɪns ɪn ɪɔs ōn rɪt. hooevʌ, ɪn sʌm sʌbjɛkt ɛrɛɪz sʌçɪ ɔz ɪn mɔtɪmɔtʌkɔl fiziks ɔnd qontɪm kemɪsʃrɛ, tɪl boɔnʃrɛz ov fiziks rʌmœn dɪfʌkɔwt tɔ dɪsdɪʃwɪʃ. fiziks ɪz bōtɪl sɪgnɪfɪçɪnt ɔnd ɪnflœnçɔl, ɪn pʌt bɛkɔz ɔdvʌnsɪz ɪn ɪɔs ʌndʌstəndɛʃ hɔv ofɪn çronzʌɛtɪd ɪntɔ nyo tɛknolɪʃɛz, bʌt ɑlsō bɛkɔz nyo ɪdɛɪz ɪn fiziks ofɪn rezʌnœt wɪtɪl ʌtɪl sɪnsɪz, mɔtɪmɔtɪx ɔnd fɪlosɔfɛ. fɔ ɛxʌmpʔl, ɔdvʌnsɪz ɪn tɪl ʌndʌstəndɛʃ ov ʌlekçrōmognɪtɪzɪm ɑ nyoklɛl fiziks lɛd dɪrɛktlɛ tɔ tɪl dɪvɔlɪpmɪnt ov nyo prodʌkçs wɪç hɔv jɜʌmɔtɪklɛ çronzçɜrmd modɪn dœ sʌsɪʌtɛ, sʌçɪ ɔz tɔlʌvɪʃɪn, kɔmpyɔtɪz, dʌmɛstɪk ʌplɪɪnsɪz ɔnd nyoklɛl wɛpɪnz; ɔdvʌnsɪz ɪn ɪrɔmōdɪnomɪks lɛd tɔ tɪl dɪvɔlɪpmɪnt ov mɔtʌrɪzd çronzçɜrt; ɔnd ɔdvʌnsɪz ɪn mʌkɔnɪks ɪnspɪɪd tɪl dɪvɔlɪpmɪnt ov kɔlkyɔlɪs .